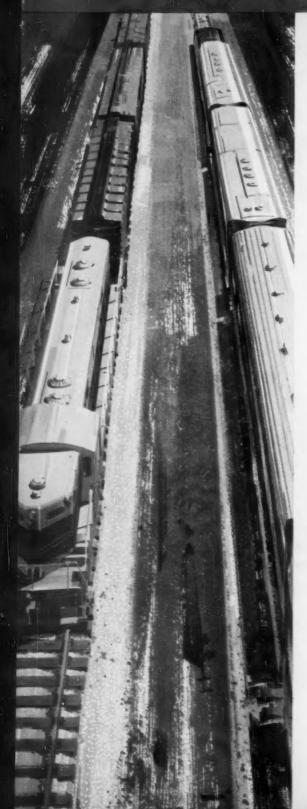
July 2, 1956

Less Slipping with Less Sand . . . p. 34

# RAILWAY AGE

WORKBOOK OF THE RAILWAYS

THE INDUSTRY'S ONLY WEEKLY NEWSWAGAZINE



# ARE YOU REALLY DIESELIZED?

Perhaps yours is one of the railroads who have completed your conversion program from steam to Diesel. But many railroads, looking to the growth potentials in the years to come, *now* say, "we see no termination to our Dieselization program."

On many roads, there is already a strain on Diesel fleets to handle present services and traffic. Thus, it's almost certain that not only next year, but also for many years, plans must be made to handle the tonnage increases (estimated no lower than thirty, and as high as sixty per cent) the industry faces over the next ten years.

Planned acquisition of power is the realistic way to meet these growth conditions as they materialize. Electro-Motive is working with many railroads today, assisting them in their own plans for growth. Such a program will insure the additional power you need, when you need it!

# Electro-Motive Division · GENERAL MOTORS

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In Canada: General Motors Diesel, Ltd., London, Ontario



# Leadership?



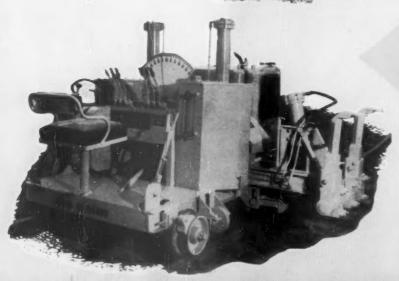
Webster defines it, among other things, as the act of preceding in an opinion or an undertaking.

Or, you could say leadership is the trait of pioneering in fields which haven't been explored before.

That's exactly what has been going on at Kershaw Manufacturing Company for the past 10 years. Research engineers have been burning the midnight oil and developing trackwork machines which have revolutionized track maintenance procedures.

Three of these machines which have put the old-fashioned pick and shovel almost out of business are the Kershaw Ballast Regulator, Scarifier and Plow, the Kershaw Track Broom, and the Kershaw Jack-All, all shown at left. Many more are on the way.

MONTGOMERY





ALABAMA

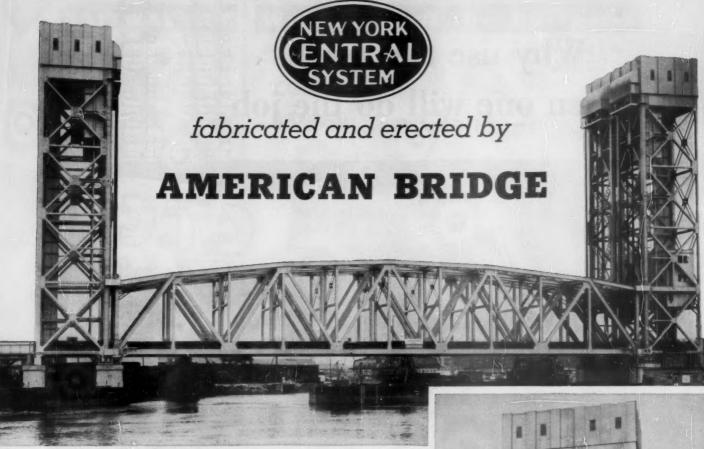
Now ...

more than ever . . .

Recognize This Symbol

of Leadership!

## new HARLEM RIVER BRIDGE for



# 1,772-ft. structure features parallel double-track vertical lift spans —

Replacing an old thru truss swing bridge built about 1895, New York Central's new Harlem River Bridge is as modern as you'll find anywhere.

1,772 ft. between abutments, it is a four-track, 28-span structure composed of: two duplicate, parallel, double-track Thru Warren Truss Vertical Lift Spans, 340 ft. long; four duplicate, double-track Tower Spans, 40' long x 33' wide x 200' high—two for each lift span; fifteen 4-track Thru Plate Girder Spans, 38' - 9" to 84' - 2" long, for South Approach; fourteen double-track Deck Plate Girder Spans—six 61', and eight 54'—for seven-span North Approach; three 4-track Beam Spans—11', 19', and 24'—forming the decks of three intermediate piers in North Approach.

The lift spans are 33' wide and 11' apart, center-to-center of inside trusses. Trusses are 40' to 55' deep. Each lift span contains 1,280 tons of structural steel and has a lift of 110', from 25' above water in lowered position to 135' above water when raised. Each lift span is raised by means of 64 wire ropes riding on eight main counter-weight sheaves 15' - 6" in diameter.

American Bridge fabricated and erected the 13,670 tons of structural steel for this modern bridge and dismantled the existing structure. The New York Central Railroad designed the lift spans and approaches. Hardesty & Hanover designed the Tower Spans and Lifting Machinery.



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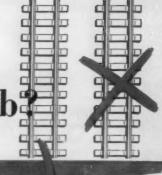
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# AMERICAN BRIDGE

INTERESTING MOTION PICTURES AVAILABLE—"Building for the Nations" and "The Suspension Bridge," two entertaining and educational films, are now available without charge to business, fraternal and civic organizations, churches, schools and colleges. Write to Pittsburgh office for bookings.

# Why use two tracks when one will do the job





Traffic conditions change—and many railroads that needed two tracks yesterday have discovered that one track with C.T.C. tailored to traffic will do the job today. What's more, their profit picture is considerably better because of substantial reductions in operating and maintenance costs.

With a modern UNION Traffic Control System, the capacity of one track can be made almost equal to that of two tracks, each signaled for train operation in one direction. Scientific charting of train operation will usually show that you can eliminate one track and handle traffic re-

quirements efficiently on single track with train movements directed by signal indication. The savings in taxes and in operating and maintenance costs quickly pay for the new traffic control system.

UNION C.T.C. has demonstrated again and again that it returns 35%, or more, on the investment, depending on conditions. Our staff of traffic control engineers is ready to help you make a survey of any territory you select and give you our recommendations for more efficient cost-reducing operations. Just call or write any of our district offices for complete details. There is no obligation.



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1956

OF EQUIPMENT AND SYSTEMS ENGINEERING . . . .

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### RAILWAY AGE Workbook of the Railways

Vol. 141, No. 1 July, 2, 1956

### CONTENTS and

## Week at a Glance

### Top railroad officers of 1965 . . .

... "must be developed while they are still young in years, so they can bring the enthusiasm and energy and flexibility of youth to the level where policy decisions are made," says Donald J. Russell, Southern Pacific president. Industry-wide awareness of the urgency of developing tomorrow's leaders now, and what representative railroads are doing about it, is the subject of a special Railway Age survey. . . . p.7

### Too many "jaloppies".

. . . is how J. W. Barriger, Rock Island vice-president, describes the state of the nation's freight-car fleet. Addressing the annual meeting of the AAR Safety Section, Mr. Barriger called for raising the minimum interchange requirements for freight cars.

### FORUM: "Heads I win-tails you lose" . .

... would be an apt title-page slogan for every ICC report about rates of railroads in competing with other transport media. The suggestion is based on the fact that the commission frequently prevents railroads from reducing rates to compete with barges and trucks, while it cannot prevent barges and trucks from reducing their charges to compete with railroads. . . . p.25

### Facts about greater safety . . .

. . . at grade crossings—through use of modern, mechanized protection—ought to alter the stands of those communities which seem reluctant to join railroads' progressive plans for automatic installations to replace manual gates and watch-

### Objection to single-tracking . . .

... short sections of double track, because trains had to slow up entering and leaving the single-track stretches, no longer holds. Using CTC, the Erie runs trains at maximum authorized speeds into and out of a 21.8-mi single-track section in Indiana-first of a series of projects planned for the main line between Marion, Ohio, and Hammond, Ind. . . . p.29

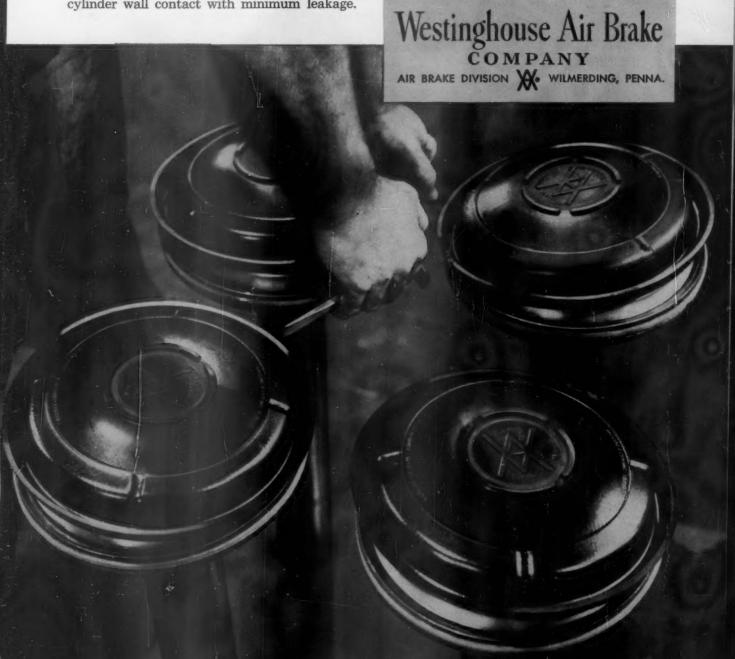
### Lading cannot touch . . .

... structural members on 350 open-top cars built by ACF

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"Quick" and "Easy" are the words for WABCO Packing Cups. At the regular cleaning time, you snap them off, clean them and snap them on again. It is not unusual for these cups to provide satisfactory service for two or more cleaning periods under normal wearing conditions. Their high resiliency assures continuous cylinder wall contact with minimum leakage.

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### RAILWAY AGE

### **Current Statistics**

Operating revenues, four month	
	\$3,413,453,838
1955	3,104,423,778
Operating expenses, four month	
	\$2,652,535,732
1955	2,371,029,566
Taxes, four months	
1956	\$361,838,961
1955	328,525,317
Net railway operating income, for	our months
1956	\$313,059,632
1955	322,371,153
Net income, estimated, four mon	ths
1956	\$236,C00,000
1955	241,000,000
Average price 20 railroad stocks	
June 26, 1956	102.94
June 28, 1955	98.86
Carloadings revenue freight	
Twenty-four weeks, 1956	17,372,659
Twenty-four weeks, 1955	16,389,826
Average daily freight car surplus	
Wk. ended June 23, 1956	3,524
Wk. ended June 25, 1955	5,052
Average daily freight car shortage	10
Wk. ended June 23, 1956	9.858
Wk. ended June 25, 1955	12,107
Freight cars on order	
June 1, 1956	133,072
June 1, 1955	16,886
Freight cars delivered	,
	27.639
Five months, 1956	14,096
Average number of railroad emp	
Mid-May 1956	1,061,972
Mid-May 1955	1,052,939
	1,002,101

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### Workbook of the Railways

### Week at a Glance CONTINUED

Industries for carrying taconite ore on the Reserve Mining Company's 47-mile railroad between Babbitt, Minn., and Silver Bay on Lake Superior. Though tailored for a special service, the cars have design innovations applicable to freight cars generally. . . . p.30

### Conventional bridge-building methods . . .

replaced a 70-year-old span as part of a line improvement program. The new bridge was erected in two continuous sections, each 722 ft long, on opposite banks of a river, which were drawn out over the river until they were linked on a center pier.

. . . p.32

### Less slip with less sand . . .

... is the immediate result of an extensive Southern Pacific research program, which is still going on The road is already on the way to its predicted goal of an 83% reduction in sand consumption, which costs the SP about \$450,000 a year. Another objective is to cut maintenance costs through reducing fouling of ballast.

### BRIEFS

### Revamping of the AAR . . .

... was under discussion by the association's directors at a Washington meeting under way when this issue went to press. Agenda included a progress report submitted by Robert Heller & Associates with respect to three AAR departments—law, operations and maintenance, and public relations.

### Brake-beam-less freight car truck . . .

... was exhibited at Chicago last week, in connection with the annual meeting of the AAR Mechanical Division. The truck, made by Buffalo Brake Beam Company, was installed on a New York Central fast-freight box car. It employs a single-disc brake, called "Brake X."

### Carloading increase of 4.4% . . .

... is forecast by the Regional Shippers Advisory Boards for this year's third quarter, compared with the like 1955 period. The forecast predicts that third-quarter loadings of the 32 principal commodity groups will total 8,155,399 cars. Actual loadings in last year's third quarter totaled 7,815,010.

### FOR LOW COST HANDLING OF HEAVY MATERIALS IN QUANTITY WITH



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Cranes are today in operation in hundreds of America's largest plants, doing their work with a minimum of maintenance. Brownhoist cranes can save money by

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### VARIETY SPICES TRAINING TECHNIQUES AS . . .

# RRs Develop Top Brass of 1965

"Letting the cream rise to the top is an all too slow process" for railroads that want to make today's junior officers tomorrow's top executives.

"We need to develop them while they are still young in years, so they can bring the enthusiasm and energy and flexibility of youth to the level where policy decisions are made."

So said Southern Pacific President Donald J. Russell last week to students at the first summer transportation management course given by Stanford University. While he was not speaking exclusively of railroad needs, but of the whole business community's requirements for skilled management, Mr. Russell's statements seem perfectly applicable to the railroad industry.

Just how apt they are may be judged from this conclusion to a "management inventory analysis" conducted in all departments of the New York Central last year:

"In the final analysis, the survival of this company depends on developing management."

The emphasis on uncovering and training 1965's executives among today's bright young men is not confined to just a few roads, however: Industry-wide awareness of the urgency to develop tomorrow's leaders now is apparent almost everywhere.

For example, some 50 representatives of several railroads took part last May in what is believed to be the first workshop devoted exclusively to railroad management training problems—at the 12th annual conference of the American Society of Training Directors. R. C. Hendron, vice-president, operations, Railway Express Agency, summed up the entire issue by asking:

"What are the obstacles in terms of people which stand in the way of building a better railroad, and what can we do about it?"

The obstacles confronting each railroad, and, very likely, each department on every railroad, differ according to such things as the individual railroad's size, nature, prosperity, tradition and location, and that necessarily means that ways to clear the hurdles will be different. That is borne out by the various approaches adopted by individual roads to improve themselves through development of better management.

### Some Railroads Send Their Budding Vice-Presidents Back to School . .

Practical applications underlie the supervisory development efforts of the Pennsylvania, which can point to a half-century of training graduate engineers in the Maintenance of Way and Mechanical Departments. J. I. Patin, director, personnel administration, states flatly: "It is not training for the sake of training, or training in the missionary sense. We realize our employees are our greatest competitive advantage."

Human relations programs are conducted by many roads, including the Pennsylvania, which believes that handling people is the "toughest problem" faced by any supervisor. The PRR, like many other roads, takes advantage of management courses offered by several universities and the American Management Association. It also uses college campuses for its own courses

in such fields as industrial development and methods and cost control.

"A progressive individual cannot help but benefit" from associating with officers from other industries, the Illinois Central declares in explaining its liking for college-given courses. "We take it for granted that these men picked up some ideas about labor relations that will be helpful to them," Personnel Director E. H. Hallman says of a course attended by two of his subordinates.

Not content with just that type training, though, the IC also provides extensive training itself in the transportation, traffic, accounting, engineering, personnel and law departments to provide individuals every chance for advancement.

The Delaware & Hudson and the Western Maryland are among other roads that help management-level personnel study job-related subjects at on-line colleges on their own time with tuition subsidies.

Proof that Mr. Russell's remarks at Stanford were not simply academic, is the extent the Southern Pacific is involved in college training for its personnel. It had 31 employees enrolled in the spring term at eight different colleges and universities this year, and pays tuition for men taking special one-month courses or year-long studies.

SP also conducts human relations conferences under the direction of management consultant Hob Ferguson in a touring "campus on wheels."

Typical of many small roads, the Bangor & Aroostook avails itself in large measure of the management courses offered by the AMA and various universities. But, the BAR also believes . . .

### Sound and Valuable Railroad Training Can Be Given Right at Home . .

. . . and has launched its own training program for supervisors. Courses have already been given on such varied topics as communications, "how to be a better boss," supervisory responsibilities and authority, and improving oral and written expression. Several other subjects designed to round out the supervisor are scheduled for the future.

One of the most extensive rail-

road-conducted programs of all may be that of the Baltimore & Ohio, the personnel department of which inaugurated a comprehensive development campaign in 1952.

"It came into being," according to Personnel Manager C. H. Holtzworth, because "management wanted to keep the supervisory force alert to the latest managerial techniques and developments" and also because "the supervisors themselves desired more information about current industrial practices and policies."

First unit in the program was a 30-hour human relations course designed to "develop positive leadership" through an analysis of "what we know about people, what they are and why they behave as they do." Another phase of the program began just last February: A one-day affair called "HOBSO" (How Our Business System Operates) in which the principles of the American business system are interpreted, related to railroads in general and then applied to the B&O in particular.

Broadening a supervisor's outlook is a third phase of the B&O program, accomplished through a course in company organization and departmental function, while still another phase is the road's on-the-job training for graduate engineers.

The Rio Grande, like the Southern

Pacific, also makes use of the services of Hob Ferguson, in addition to training in freight rate theories and courses for graduate engineers.

"Better supervision which must be trained and properly developed" is vital to its future, according to the Richmond, Fredericksburg & Potomac, because the "hit-or-miss 'absorption' theory" just doesn't work any more. This road sets out to develop among its supervisory personnel "a better understanding and appreciation of the company, its organization, purposes and aims; to develop a thorough knowledge off responsibilities; and to develop skills in providing service performance through good leadership and training."

Flexibility is stressed in the Rock Island's two-year training program for technical or non-technical college graduates. While it sees room for improvement in the course through modifications and better screening, it feels it is on the right track on its experiences with 40 men who have been enrolled in the course since 1951.

With consideration given to men's aptitudes, interests and preferences, the Rock Island "steers" its trainees in this program into work they seem best suited for after 18 months, and makes them junior officials in the

departments they work in after completing the course.

"Our biggest problem," R. R. Hicks, director of personnel, New York Central, relates, "is the adoption of some type of individual performance appraisal procedure with the view of assisting men to improve their performance, identify individual training needs and motivate individuals toward self-development. In our company, we do not feel that management training is a matter of programs, but instead, that it must be a 'way of life'."

Avoiding formalized training, the Central does utilize AMA and similar courses, and stresses activities in organizations like AREA and the various AAR divisions. At the same time, many informal kinds of training proceed within departments which have been given added responsibility in this area.

The Pittsburgh & Lake Erie works similarly, providing training in such fields as public speaking, cost control, better supervision and public relations.

The Lackawanna, too, avoids formalized training but provides extensive development "on-the-job" as a better method of handling men, while the Chesapeake & Ohio concentrates on training within departments.

# Too Many "Jaloppies," Barriger Says

AAR Safety Section hears Rock Island officer ask for raising of minimum interchange requirements

Because freight car assignments are on an "all-or-none" basis, Rock Island Vice-President J. W. Barriger told the recent annual meeting of the AAR Safety Section at Louisville, railroads "must" raise minimum interchange requirements.

"There are a good many freight cars running on American railways today that are nothing more than railway jaloppies," he declared. While these may be suitable for low speed, short trains, he went on, they "constitute a hazard to high-speed movement of heavy trains, especially when these inadequate vehicles happen to be placed among cars at the head end where stresses and strains are most severe."

"The diesel locomotive," he asserted, "has made every over-age

or undermaintained freight car a menace to safe and economical operation," because it has made mass transportation at high speeds feasible.

Older passenger units are not used for more exacting work, Mr. Barriger stated, but "necessary flexibility" prohibits restriction of freightcar movement so long as the units of equipment meet interchange requirements.

"These must be raised for freight cars," he said. "Use of any freight car for interline loading which cannot safely be placed at the head end of the longest and heaviest and fastest freight train that runs anywhere in America must be prohibited."

Commenting that "safety is the end product of good management," Mr. Barriger also advocated "redoubled efforts... to establish recommended hot box preventive maintenance practices." Nothing, he said, will contribute more to safety than to "reduce hot boxes to the status of really infrequent and extraordinary occurrences."

Locomotive Horsepower—Mr. Barriger, observing that 6,000 hp has appeared to be about the adequate maximum for locomotives for the past 20 years, declared that "the prevailing standard of motive power capacity should advance to 10,000-12,000 hp per locomotive within the next 10 years or less."

J. E. Tilford, president, Louisville & Nashville, and M. B. Phipps, vice-president, operation, Nickel Plate, were among other speakers at the convention, each stressing individual responsibilities in attaining (Continued on page 10)

# RAILWAY MARKET OUTLOOK THIS WEEK

### a RAILWAY AGE Workbook Page

Carloadings Down.—Loadings of revenue freight in the week ended June 23 totaled 799,461 cars, the Association of American Railroads announced on June 28. This was a decrease of 1,970 cars, or 0.2%, compared with the previous week; an increase of 5,034 cars, or 0.6%, compared with the corresponding week last year; and an increase of 86,301 cars, or 12.1%, compared with the equivalent 1954 week.

Loadings of revenue freight for the week ended June 16 totaled 801,-431 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS

For the week	-		
District	1956	1955	1954
Eastern Alleghany Pocohontas Southern Northwestern Central Western Southwestern	125,635 157,985 66,584 128,220 127,144 132,448 63,415	125,795 150,599 62,451 124,047 129,652 128,392 59,021	111,833 126,912 51,768 117,877 118,302 121,131 59,414
Total Western Districts	323,007	317,065	298,847
Total All Roads	801,431	779,957	707,237
Commodities: Grain and grain products Livestock Coal Coke Forest Products Ore Merchandise I.c.! Miscellaneous	62,021 6,576 142,992 12,852 47,102 89,363 59,330 381,195	53,709 5,598 133,589 12,407 48,632 80,373 66,607 379,042	57,073 5,798 114,836 7,291 43,524 72,110 60,087 346,518
June 16 June 9 June 2 May 26 May 19	801,431 787,075 719,209 788,297 778,997	779,957 781,938 709,351 785,589 769,879	707,237 697,583 612,314 689,292 681,967

Cumulative total, 24 weeks ...17,382,659 16,389,826 15,170,107

In Canada.—Carloadings for the seven-day period ended June 14 totaled 93,862 cars, compared with 91,703 cars for the previous sevenday period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:	MAN IN A	
June 14, 1956 June 14, 1955	93,862 84,523	32,995 32,076
Cumulative Totals:		
June 14, 1956 June 14, 1955	1,889,522	814,599 736,857

### New Equipment

### LOCOMOTIVES

- Installations Up.—AAR reports new locomotive units installed by Class I roads during first five months of 1956 totaled 661 (all diesel-electrics), compared with 516 units (509 diesel-electrics, seven electrics), in comparable 1955 period; May installations alone totaled 126 units (all diesel-electrics), compared with 136 in April and 103 in May 1955; units on order for Class I roads on June 1 totaled 885 (858 diesel-electrics, 15 gas turbine-electrics, 12 electrics), compared with June 1, 1955, backlog of 385 (382 diesel-electrics, three electrics).
- ➤ Reading.—Ordered two 2,400-hp Train Master diesel-electric units, Fairbanks, Morse; cost \$508,000; delivery expected next October.
- Southern Pacific.—Ordered 154 diesel-electric units; cost \$24,000,000; included are 90 1,750-hp freight units and 26 1,200-hp and 38 900-hp switching units; orders were placed with Electro-Motive, Alco Products and Fairbanks, Morse; delivery, to be completed by April 1957, will increase SP's diesel fleet to 2,000 units, representing nearly 3,000,000 hp and approximate outlay of \$313 million; SP—90% dieselized now, with only 405 steam locomotives, compared with 2,102 in 1946—contemplates complete dieselization by about end of 1958.

### **New Facilities**

- ➤ Great Northern.—Ordered equipment from General Railway Signal Company for installation of 110.7 miles of centralized traffic control between Willmar, Minn., and Breckenridge, and 40.1 miles of Syncroscan centralized traffic control between Williston, N.D., and Bainville, Mont.
- ► Louisville & Nashville.—Has announced repair and reconstruction of 11 bridges and tunnels at combined cost of \$874,983; construction of new freight house jointly with NC&StL at Hills Park, Ga. (\$787,200); purchase of \$319,560 of roadway machines, motor cars, motor vehicles, and motor trailers; and construction of tracks to serve Container Corporation at Brewton, Ala., and Baird Ward Printing Company at Nashville, Tenn. (\$91,039).
- ▶ Maine Central.—Ordered equipment from General Railway Signal Company for installation of 27.7 miles of centralized traffic control between Pittsfield, Me., and Northern Maine Junction.
- Norfolk & Western.—Ordered equipment from General Railway Signal Company for installation of electric car retarders at car dumper facility in Lamberts Point, Va.
- ► Wabash.—Will spend \$7 million on roadway improvements this year, including \$200,000 for maintenance of way equipment, \$350,000 for rail and fastenings.

(Continued from page 8)

better railroad safety records. Mr. Phipps suggested adding a fourth rule—"E" for enthusiasm—to the standard safety precepts: engineering, education and enforcement.

Mr. Tilford, discussing grade crossing accidents, assailed "unconscionable sums being awarded in casualty cases" and protested against "low ethical standards of some members of the bar." He said railroad

law departments should be alerted to "individuals and lawyers who appear to be involved in this racket."

New officers of the Safety Section are: Chairman, R. S. James, superintendent, safety and fire prevention, Rio Grande; vice-chairman, C. T. DeWitt, superintendent, safety and fire prevention, Northern Pacific. Mr. James succeeded R. C. Sabens, superintendent of safety of the Nickel Plate.

### Pegrum Sees 5 Transport "Industries"

The transportation industry today is not a single industry but a group of five "industries," each with its own distinct problems.

Regulation of the vigorous competition between these widely diverse "industries" must be separated from the regulation of conditions within any one of them. Once that is done, public policy "should place major reliance upon competition as a disciplinary force in the field of transport."

These views were expressed by Dr. Dudley F. Pegrum, professor of economics, University of California at Los Angeles, in a statement filed with the House Committee on Interstate and Foreign Commerce, by the Railway Progress Institute.

The House group has just completed seven weeks of hearings on bills to implement recommendations of President Eisenhower's Cabinet Committee on Transport Policy and Organization.



"Hi-Level" Makes Off-Line Exhibition Tour

The Santa Fe's new "Hi-Level El Capitan" made its debut June 16 with a special pre-inaugural press run over the Baltimore & Ohio between Pittsburg and Washington, D.C. After the press run the train was exhibited in Washington, Pittsburgh, Youngstown,

Ohio, Detroit, Chicago and Kansas City, Mo. Santa Fe will re-institute the \$5 extra fare when the new equipment begins regular Chicago-Los Angeles revenue service July 15. The 47 Budd-built "Hi-Level" cars are estimated to have cost about \$13 million.

"It must be recognized," Dr. Pegrum said, "that regulation which may be valid for intra-agency control may not be appropriate for inter-agency conditions. Competition among industries may be a very different thing from competition among firms in the industry."

As it happened, the RPI statement by Dr. Pegrum was filed with the House group just after Secretary of Commerce Sinclair Weeks had testified in favor of extending the ratefreedom program to competition between carriers operating in the same mode of transportation as well as between carriers of different modes.

Dr. Pegrum, who described the different economic structures of the several transportation "industries," pointed up an alleged economic fallacy of intra-agency competition in rate making, while calling at the same time for inter-agency price competition.

"Resolution of the problem of inter-agency competition within the framework of sound economics," he said, "would be a major step towards developing a coherent national policy. To accomplish this, Congress and the regulatory commissions should recognize:

"(1) That inter-agency competition should be in the same category as any other inter-industry competition; (2) That policy on interagency competition should be separated from policy on intra-agency competition; and, (3) That regulation of the various agencies should be tailored to the economic characteristics of each agency and to the public interest in each.

"Public policy today should place major reliance upon competition as the disciplinary force in the field of transport. Competition is such a pervasive force in modern transportation that it would be in the public interest to place full reliance on it in inter-agency competition."

The RPI is printing Dr. Pegrum's presentation in booklet form for wide distribution.

### Boyd Heads Mediation Board

Robert O. Boyd is now chairman of the National Mediation Board. He was elected for a one-year term beginning July 1, succeeding Leverett Edwards, who continues as a member of the board.

### "Aerotrains" Reassigned By PRR and NY Central

Reassignment of their respective General Motors "Aerotrain" equipment has been announced by the New York Central and Pennsylvania.

Effective June 24, the PRR "Aerotrain" was taken off its New York-Pittsburgh run and assigned to an earlier schedule between Philadelphia and Pittsburgh, with Downington and Latrobe (westbound) and Latrobe and Huntington (eastbound) added to its stops in Penn-

The Central's "Aerotrain," now running between Chicago and Detroit, will start service between Chicago and Cleveland on July 15, leaving Cleveland at 7:35 a.m. (CDT) and arriving Chicago at 1:15 p.m. (CDT). Returning, it will leave Chicago at 5 p.m. and arrive Cleve-

land at 11:45 p.m.

The Central also announced that starting July 15 the New York-Chicago "Pacemaker" will be operated in conjunction with the "Commodore Vanderbilt," leaving New York at 5 p.m. (EDT) and arriving Chicago at 8:10 a.m. (CDT).

PRR also announced that as of June 24: its "Red Arrow" was reestablished as a separate New York-Detroit through train; that the "Indianapolis Limited" service was re-

established between New York and Dayton, Richmond, Ind., and Indianapolis; and that the "Pittsburgher," which has been discontinued New York-Pittsburgh in some previous summers will continue in full operation this year.

### **Arpaia Defends Weeks Report Stand**

ICC Chairman Anthony Arpaia has vigorously denied that the commission's opposition to some parts of the Cabinet Report stems from a desire to "aggrandize its power."

Addressing the New England Public Utility Commissioners recently at Portsmouth, N. H., he said it had been charged that the ICC disapproves some of the proposed legislation "merely because it would tend to reduce the rate-making power of the commission. There is nothing further from the truth."

Mr. Arpaia declared the commissoon had never "entertained such an attitude or supported legislation for the purpose of extending its power except where, in its judgment, fed-

eral action was absolutely necessary to effectuate the purposes" of Congress. The "sole objective of the commission," he asserted, "is to carry out its serious responsibilities as guardian of the public interest."

He warned that "the various forms of transportation are vigorous and articulate in advancing their own interests. But who, other than the ICC is to speak for [those] who may get caught in the squeeze of an unrestrained competitive struggle?"

Generally, the commission is opposed to the Cabinet Committee's rate-freedom proposals, which are considered by railroads as the report's most important recommendations.

## Where to flag down more buyers in railroading this year...



Centennial Number

SIMMONS-BOARDMAN, 30 Church St., New York 7 RAILWAY AGE



### \$1,000 for Winner of KO&G Slogan Contest

"This is the first time I ever won anything in my life, and I've entered a million contests," commented Mrs. June Roberts of Durant, Okla., when she was told her slogan "Sooner to the Southwest" was the \$1,000 first-prize winner in the contest conducted by the Kansas, Oklahoma & Gulf.

Mrs. Roberts is shown accepting her prize from R. H. Lomax, KO&G president. At left is C. G. Hartness, the road's agent in Durant, who received \$100 for his efforts in promoting the railroad's slogan contest in his area (Railway Age, May 14, p. 53).

### March Expenditures Double March '55

Gross capital expenditures of Class I line-haul railroads in March were more than twice those of March 1955—\$177,960,000 compared with \$58,897,000.

This was reported by the ICC's Bureau of Transport Economics and Statistics in its "Transport Economics." The report also showed that March outlays for equipment totaled \$91,705,000, while the month's expenditures for road facilities totaled \$26,255,000.

As noted in Railway Age of June 25, page 5, capital expenditures for this year's first quarter were 71.5% above those of the like 1955 period; and current estimates indicate that this year's 12-month total will be about \$1.3 billion, up 45%.

# ACTUAL AND ESTIMATED GROSS CAPITAL EXPENDITURES CLASS I RAILROADS

	Number				Per cent of total	
Period	of roads	Road Thousands	Equipment Thousands	Total Thousands	Road	Equipment
Actual 1955: 1st quarter	126	\$ 54,278	\$119,351	\$173,629	31.3	68.7
Year	126	340,109	568,334	908,443	37.4	62.6
Actual 1956: 1st quarter	113	73,463	224,252	297,715	24.7	75.3
Estimated 1956:  2nd quarter  3rd quarter  4th quarter	2108 2108 2108	110,950 125,634 112,850	248,676 222,228 119,932	359,626 347,862 312,782	30.9 36.1 36.1	69.1 63.6 63.9
Total: Year 1956, actual and estimated	_	442,897	895,088	1,317,985	32.1	67.9
Per cent of increase: 1st quarter 1956 vs. 1955 Year 1956 vs. 1955	-	35.3	87.9	71.5	-	-
actual and estimated	-	24.3	57.5	45.1	-	-

<sup>1</sup> Effective January 1, 1956, Class I railroads are those with annual gross operating revenues of \$3,000,000 or more; prior to that date this class included carriers with revenues above \$1,000,000. Comparisons of 1956 figures with those of 1955 are not materially affected, however, since gross capital expenditures of carriers which changed class amounted to only 0.1% of the total in 1955.

### May Car Installations Were 21/2-Year High

Class I railroads and their carline affiliates in May placed more new revenue freight cars in service than in any previous month since October 1953. The May installations totaled 5,970 cars,

This was reported by Chairman A. H. Gass of the Car Service Division, AAR, in his latest review of the "National Transportation Situation." He also reported that the Class I roads increased their ownership by 1,224 cars in May, retirements of the month having totaled 4,677 cars. Ownership increased by 6,506 cars during this year's first five months.

Heavier Loading—Final 1955 figures on tons-per-car were summarized by Mr. Gass. They showed that the year's average of 42.4 tons was a new high. It topped 1954's average by a ton, and it was 0.4 ton above the previous record, which was 1951's 42 tons. All commodity groups, except forwarder traffic, showed heavier average loading in 1955 than in 1954.

Freight cars produced an average of 1,027 net ton-miles per service-able car per day in March, the latest month for which data are available. That was the same as February's performance, and substantially better than any previous March since 1951.

### Record Highway Program Approved by Congress

Congress last week approved and sent to the White House a bill providing for history's greatest highway-building program on which expenditures totaling nearly \$33½ billion are contemplated. President Eisenhower was expected to sign the bill property.

The \$33½ billion will include federal-government expenditures totaling about \$28 billion and state government outlays totaling about \$5½

billion.

Twenty-six billion in federal funds will be spent over 13 years on the so-called Interstate Highway system, a 41,000-mile network linking most cities of more than 50,000 population. The federal contribution to the cost of this project will be 90%, the states being required to supply only 10%.

The bill also authorizes additional funds to carry on the regular fed-

<sup>2</sup> Estimate not furnished by five roads.

eral-aid highway program for the next three years. Here an additional \$125 million was authorized for the 1957 fiscal year, which began July 1, making the total for that year \$825 million. Authorizations of the two following fiscal years are \$850 million and \$875 million. The federal contribution under this program is 50%, the states being required to supply a like amount.

Financing—The bill also provides for additional levies on highway users. These include an increase of one cent, from two to three cents, in the federal tax on gasoline and other fuels. The tax on tires is also increased, and a new levy is imposed

on retread rubber.

Another new tax will apply to highway vehicles having a "taxable gross weight" in excess of 26,000 lb. The rate will be \$1.50 per 1,000 lb.

# Lakes Board Opposes "Punitive" Demurrage

Disapproval of any attempt by railroads or the Interstate Commerce Commission to assess "punitive" demurrage charges against shippers for car detention was expressed by the Great Lakes Regional Advisory Board at its recent meeting in Buffalo, N. Y.

The board unanimously adopted a resolution of its executive committee that railroads serving the board's district be urged to vote against proposed increases in demurrage rates, on which car-owning railroads are now being polled (Railway Age, June 25, p. 13, and June 4, p. 14). The board also recommended that the ICC defer any action on similarly increasing demurrage charges.

### KC-Birmingham Freight Runs Speeded Up by Frisco

The Frisco recently cut 10 hours from its Kansas City-Birmingham freight schedule. This, together with schedule adjustments made to provide better connections, has cut 24 hours off the transit time of some transcontinental freight.

Two new "hotshot" freight trains, added to the Frisco schedule, operate between Birmingham - Kansas City without setting out or picking up any tonnage en route.

J. E. Gilliland, Frisco vice-president—traffic, said: "These sched-

ules were worked out to obtain the maximum service for the shipper. We are confident that the improved operating setup of the Frisco will cut hours and hours off the traveling time of much of the traffic moving into and from the Southeast to points in the Southwest, West and West Coast. A car leaving Florida, for example, on Monday, will be delivered to a West Coast point on the following Monday—or 24 hours sooner than possible under existing schedules."

### **New Plan to Widen RPI Membership**

To increase its membership, particularly among smaller supply companies, the Railway Progress Institute has revised its dues schedule for companies with gross annual railroad sales under \$3 million.

The new schedule, announced by RPI's governing board, calls for annual dues of \$500 for supply companies which gross less than \$2 million annually, and \$750 if such sales average \$2-\$3 million annually. The change, effective January 1, 1957, does not affect companies in the above-\$3 million bracket.

Meanwhile, RPI has pointed out that companies enrolling after July 1 this year can do so at 60% of the existing dues schedule for all classes of membership. On this basis, minimum dues for the balance of 1956 will be \$600.

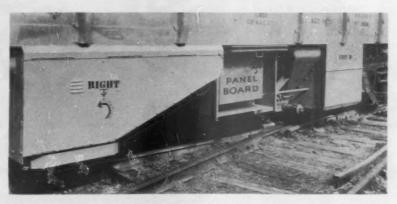
C. L. Heater, RPI vice-chairman and head of the membership committee, said the new 1957 dues schedule probably will not provide appreciably larger funds for RPI but will increase its representative nature and permit broader participation in the organization's activities.

### No Yard Differential on GP Diesel

The dual-purpose diesel, designed for both road and yard service, has been construed to be a "road engine" on the Central of Georgia.

A referee for the National Railroad Adjustment Board's First Division has so held in a case in which engineer claims were sustained because the "road engines" were used in yard service.

The carrier's applicable rule provides that "when road engines are usel in yard service for any part of (Continued on page 36)



### New System Unloads 50 Tons of Sugar in an Hour

A railroad car with built-in conveyor system for completely automatic unloading of sugar and other bulk materials has been designed and constructed by J. C. Corrigan Company, Boston. Developed in cooperation with Atlantic Sugar Refineries, the new design is said to make it possible for the first time to unload sugar by push button from a central, electrical-control

panel on the side of the car. The first of two such cars ordered already is in operation. Photograph shows pushbut ton control panel, which permits one operator to control unloading. At left is one of the discharge points; there is one on each side of the car, permitting unloading from either right or left side. A carload of 50 tons can be emptied in an hour.



Try seconds-fast crawler starting. Famous International gasoline conversion, in-seat starting is standard equipment in all International diesel models! You get fast, positive, all-weather diesel starting, without fooling or fouling!

Try the lever-pull ease and power-transfer efficiency that new International Cerametallic engine clutch facings give you. And these self-cooling, long-lasting facings are of long-proved, well-known dry-type clutch design. No mystifying seals, circulators or "cold-sensitive" liquid to live with!

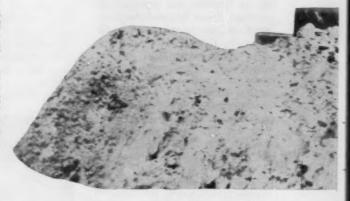
Feel-out new International crawler steering. Unrivaled TD-24 Planet Power steering with capacity-boosting power on both tracks, is responsive to even a school-boy's finger-tip touch! New hydraulic booster steering in new TD-18 and TD-14, reduces steering lever pull a big 75%. And new T-6, TD-6, and TD-9 are 25% easier to steer!

Above all, load up a new International crawler with matched or allied International equipment—prove how bonus-powered performance boosts production—daylighting curves, realigning right-of-way, cleaning ditches, and other maintenance-of-way jobs. Choose from 7 heavy-duty crawler models, 41.5 drawbar hp TD-6 to 200 net engine hp TD-24 Torque-Converter. See your nearby International Construction Equipment Distributor for a demonstration today.

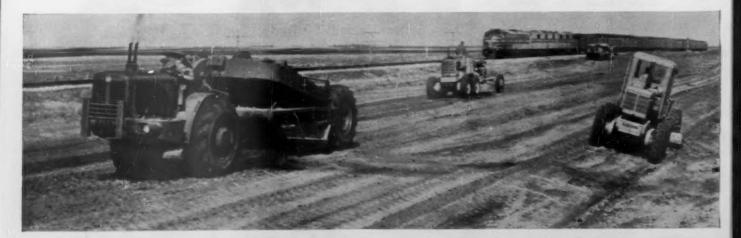
Try it ..

Try high-speed, easy-loading, big-capacity International Paystrapers. This road realignment job is really high-balling. Two fast-stepping International 75 Paystrapers push-loaded by an International TD-24 tractor get a heaping load in less than a minute—speed to the fill at 24 mph. Final grading is

bonus-powered crawlers...matched dozers. This new 103 hp TD-18 (182 Series) is helping build streets in Saginaw, Michigan—dozing sand with International hydraulic dozer. Operator rides in adjustable, "club-car" comfort—has "control tower" job-bossing vision, and a clean, safe deck with ample "stretch-out" room.



handled by two motor graders—powered by International Diesel engines. Try a new bonus-powered International Payscraper on your job. See how you get bigger payloads. Prove new Payscraper capacity!



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A COMPLETE POWER PACKAGE INCLUDING: Crawler, Wheel, and Pipe-Boom Tractors . . . Self-Properted Screens and Softon Dumps . . . Crawler and Rubber-Tired Loaders . . . Off-Highway Trucky . . . Diesel and Corburated Engines . . . Mater Truck

### Questions and

### **Answers**

Of current interest

to the Transportation Department

Can a reclaim be made when a (Junction Rule 2) car refused by a shipper is returned to the owner instead of to the line delivering the car to the road on which the shipper's plant is located . . .

?

How should revenue be prorated (under Per Diem Rule 21) when one road participating in the haul is required to replace the original car on which the shipment was loaded...

2

Can — and should standards for measuring yard and terminal efficiency be established...

3

CONDUCTED By G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

### No-deliver car to furnishing road

Per Diem Rule 14, Section 6, provides for a reclaim of not to exceed three days when a car is rejected by a shipper and returned to the delivering road. Is such reclaim in order when the car rejected is a Junction Rule 2 car of another road, after which rejection is delivered to the owner?

"No. Car must be returned to the

delivering road to make that road obligated to pay a reclaim. Attention is called to the fact that in accepting a Junction Rule 2 car from a connection for return loading, the switching road became jointly responsible with the delivering road for a violation of Car Service Rule 2B."—Eastern Association of Car Service Officers.

### Both roads get a split

A heavy duty flat car, subject to the provisions of Per Diem Rule 21, whose load originated on railroad A, and routed to destination via roads B, C, D, E, F, and G, became disabled on road C. The load was transferred to another heavy duty flat owned by road C and moved to destination on that car. Road A collected the pro rate of the \$100

charge, provided for in Rule 21, from the several roads. What adjustment, if any, should be made by A with road C?

"In all fairness, road A should turn over to road C the amounts which it collected from railroads D, E, F, and G."

-Eastern Association of Car Service Officers.

### Yes-according to AARS committee

We quoted from the report of a committee of the American Association of Railroad Superintendents in our last column. However, limited space prevented using what I believe are several important passages. Here they are.—G. C. R.

"In the majority of cases local supervision has authority to reduce clerical and yardmasters' forces, but to restore or augment these positions authority, in most cases, must be granted from that level which is higher than the superintendent.

"The survey indicated that very few supervisors had any conception of the cost of doing business versus the revenue received from cars handled on either an overall basis or on a unit basis.

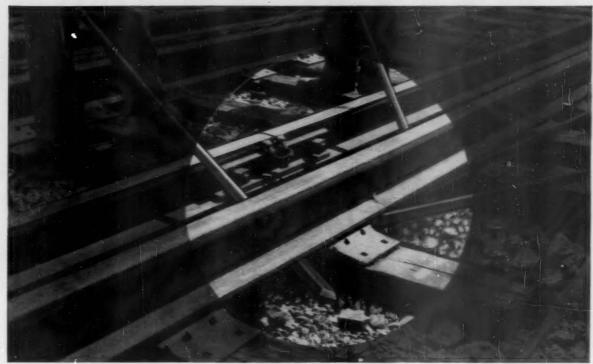
"In the desire for uniformity of

operations some roads are not allowing terminal officers sufficient latitude within bounds so the individual can exercise his own style of management.

"The overwhelming majority advised that they did not have time for adequate planning, or, said another way, an opportunity to stand off and take a good look at their problems. Further, that they did not have time for rest and relaxation comparable to positions of like responsibility in other industries. As a result this tends to make the individual narrow and self-centered."

It is good to learn that a number of roads are beginning to give their middle management men more authority, as this report recommends.

-G. C. R.



Year after year, mile after mile conventional rail is being replaced by trouble-free, continuous rail.

# Longer rail life at LESS COST with "RIBBONRAIL" SERVICE

Leading railroads throughout the nation are eliminating the expense of assembling and maintaining rail joints. Here are some of the savings now possible with LINDE'S RIBBONRAIL SERVICE.

 Reduces Overall Maintenance. There are no angle bars, bolts, nutlocks, and copper bonds to install or replace. Maintenance on rolling stock is less too. Wear and tear on motor housings, car wheels, axles, and bearings is substantially cut down.

2. Increases Track Life. The smooth continuous

bond does away with battered rail ends . . . and trouble from loose, out-of-line, or worn rail joints is eliminated.

 Improves Roil Riding Quality. By reducing the operating vibration, continuous rail decreases spillage, and vastly improves riding comfort.

LOOK TO "LINDE" . . , the leader in continuous rail welding, and plan your RIBBONRAIL SERVICE program now. Call or write the Railroad Department of LINDE AIR PRODUCTS COMPANY.

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Supplying to railroads the complete line of welding and cutting materials and modern methods furnished for over forty years under the familiar symbol...



Keeping America on the GO...with



# The big railroad switch -and all America

53 RAILROADS and private car owners have now gone "Roller Freight" to improve service!

16,959 FREIGHT CARS equipped with Timken® tapered roller bearings are already in use or on order! ORDERS IN 1955 exceeded the previous 4 years combined!

OVER ONE-FOURTH THE CARS recently ordered by railroads will be shared by non-owner lines

THE biggest event in railroading is the way "Roller Freight" is suddenly catching on.

For years, it's been gaining ground, bit by bit. Now the big switch has started. In 1955, the railroads ordered more freight cars equipped with Timken® tapered roller bearings than in the previous 4 years combined!
On top of this, over one-fourth of

these cars will be shared by their

owners with all other railroads. Since 1948, the number of railroads and private car owners owning

"Roller Freight" cars has grown from 12 to 53. "Roller Freight" cars have multiplied from 627 to 16,959. In 1955 alone, 6,441 cars were ordered. Up to now, the railroads have con-

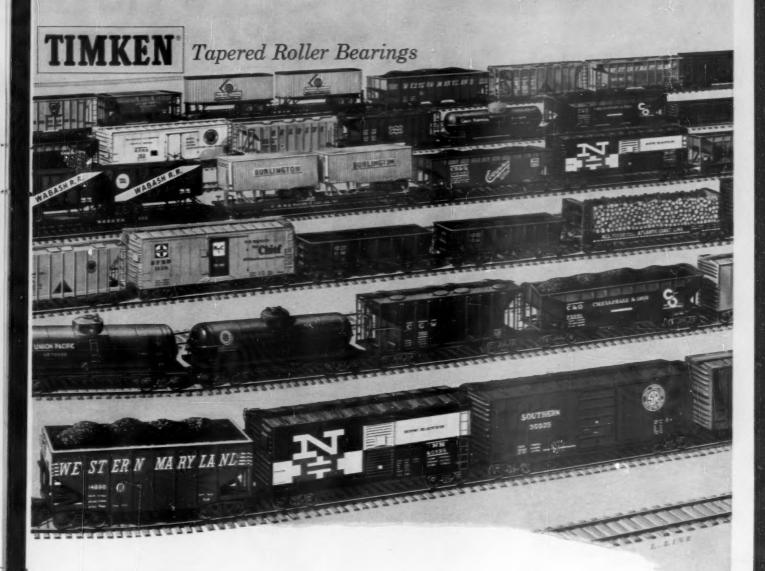
fined the use of "Roller Freight" cars to owner lines, where they could accurately study the advan-

tages of "Roller Freight". Important operating economies and improvements in service have been revealed. largely through the reduction of hot boxes and inspection costs.

This has caused the railroads to accelerate their switch to "Roller Freight" with over one-fourth the cars on order earmarked for interchange service.

These interchange cars won't

Only TIMKEN° bearings roll so



# to "Roller Freight" is on will benefit

spend all their time on their home lines so the roads owning them won't enjoy their full benefit. But the potential benefits of "Roller Freight" are so great that these roads are hastening the day when all freights are on roller bearings. Then all railroads will enjoy the full benefits of "Roller Freight" together. America will have one answer to the freight car shortage.

Traditionally, freight cars have been dependent on friction-type bearings or "brasses". These frequently fail, despite an annual expenditure of \$135 million in inspection and maintenance to keep

them operating. Hot boxes result, the biggest cause of freight train delays.

Timken tapered roller bearings eliminate the hot box problem. They don't slide the load. They roll it. Their tapered design ends lubrication problems and the need for frequent journal box inspection. Ter-minal bearing inspection time is cut 90%, lubricant cost as much as 89%.

90%, lubricant cost as much as 89%. All America benefits from "Roller Freight". And "Roller Freight" is on the way! The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ont. Cable address: "Timrosco".

### "ROLLER FREIGHT" ROLL CALL

Railroads having 20 or more freight cars on Timken bearings:

Akron, Canton & Youngstown Alaska Railroad Atchison, Topeka & Santa Fe

Atlantic Coast Line Baltimore & Ohio Boston and Maine Chesapeake & Ohio

Chicago, Burlington & Quincy

Chicago Great Western Duluth, Missabe & Iron Range

Louisiana and Arkansas Nickel Plate Road New Haven Northern Pacific Pennsylvania

Reading St. Louis-San Francisco Southern Railway Union Pacific Wabash



true, have such quality thru-&-thru



# NEW POWER...NEW LIFE...NEW "LOOK" FOR YOUR OLD STEAM WRECKER...

## With L. B. Smith Diesel Conversion

The 29-year-old Long Island locomotive wrecking crane shown above has just been completely modernized in our shops. Conversion from steam to Diesel has added years of service, increased efficiency and reduced operating costs on this 150 ton Brownhoist.

Conversion included plenty of power in a GM Diesel with Twin Disc torque converter. Clutches are air-operated by a Westinghouse compressor. The new "Look" benefits the operator, for he now has a complete view of his work from the cab which has been relocated in a right front position. All controls have been

placed in the same arrangement with which he is familiar.

This is one of some 50 cranes modernized by L. B. Smith personnel. With a major portion of our large plant facilities devoted to the repair of cranes, shovels and heavy equipment, we make every possible effort to keep the quality of our work equal to the reputation we have earned over the years.

If your Dieselization program includes the conversion of wrecking cranes, you will undoubtedly benefit from discussing it with us.

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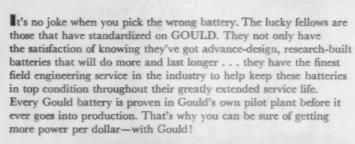
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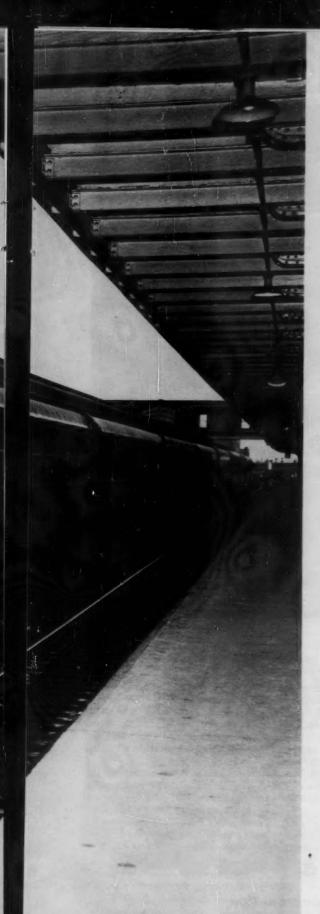
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KEY TO RAILROAD PROGRESS . . . ELECTRICAL PIONEERING



# **General Electric-Equipped** Multiple-Unit Cars **Provide Better Service**, **Lower Operating Costs** for the New Long Island Rail Road

Seventy-four modern General Electric-equipped Multiple-Unit Cars, recently delivered to the Long Island Rail Road as part of a twelve-year, \$60,300,000 rehabilitation program are providing better service and reducing operating costs. Each of these new cars is equipped with four high-speed G-E truck-frame-mounted motors which are capable of providing fast acceleration and higher schedule speeds. Passengers enjoy smooth, quiet performance. Proven equipment operation and reliability will greatly reduce maintenance costs and "out-of-service" time.

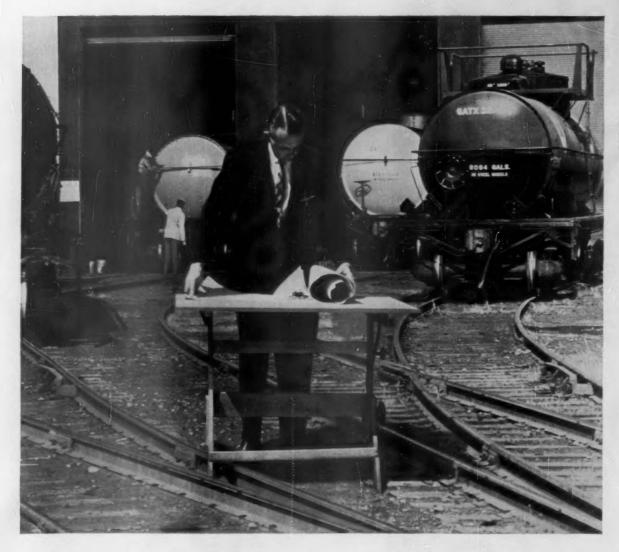
The Long Island, the nation's busiest passenger railroad, carries 285,000 commuters daily between New York and the rapidly growing Long Island suburban area.

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### What does an engineer do for GATX?

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# "Heads I Win-Tails You Lose"

The above phrase could be appropriately inscribed as a slogan at the top of the title page of every ICC report dealing with rates of railroads in competing with other agencies of transportation. The appropriateness of this characterization is evidenced by the fact that the ICC can, and frequently does, prevent the railroads from reducing rates to compete with trucks and barges, while it is completely powerless to prevent the barges and trucks from reducing their charges to compete with the railroads—because two-thirds of the trucks and ninetenths of the barges are exempt from ICC regulation.

The ICC is persisting in this one-sided—"heads the competitors win, tails the railroads lose"—regulatory course. This disheartening fact is evidenced by a decision handed down as recently as May 23 and known as Pig Iron, Rockwood, Tenn., to Chicago and Joliet (I.&S. Docket No. 6388)

The railroads proposed a proportional rate from Rockwood to Chicago and Joliet which—combined with the local rate from these two points to Milwaukee and West Allis—would have totaled \$8.8233, or approximately the same as the existing barge-rail rate (via barge to Joliet or Chicago and thence by rail to Milwaukee).

The traffic is now moving entirely by the barge-rail service. The proposed all-rail service would have produced revenue of 64.9 cents per car-mile—which is certainly an attractive rate. Earnings per car would have been \$340—compared to a U.S. average per carload of pig iron of less than half that amount. The ICC conceded that the proposed all-rail rate "appears to be compensatory." Nevertheless Division 2 (Commissioner Freas dissenting) denied the railroads the right to make this all-rail rate, solely because the majority decided that they ought to favor the barges.

### Railroads Never Favored

If the shoe had been on the other foot, and Division 2 had wanted to favor the railroads by establishing a barge-rail rate at a high "umbrella" level, it would have been prevented from doing so by law. And, even if the law were not specific in thus protecting the barge operators, no effort by Division 2 to regulate rates to shift traffic to the rails could be effective—because a "bulk carrier" or private barge could take the traffic anyhow, by making as low a charge as their costs would permit. Private barges and "bulk carriers" are exempt from regulation.

This competitive rate situation is an issue of critical

importance. In the circumstances, no sounder advice could be given to railroad people than that presented at the recent Accounting Division convention by President Fred G. Gurley of the Santa Fe, when he said:

"I suppose you know something about the Cabinet Committee Report, but you cannot know too much about it and the specific legislative proposals which were made following the Cabinet Committee Report. The report points out that present restrictive rate regulation often prevents the railroad or highway common carrier, as the case may be, from realizing its inherent economic advantage by reducing its rates in those situations where it can provide the service at a lower cost than other competing forms of transportation.

### The Public Pays

"This in turn has prevented the shipper and the consumer from realizing the full benefits of low-cost transportation which would be available if greater freedom were given to the play of competitive forces.

"None of the exempt highway and water carriers and none of the regulated water carriers can be prevented from fixing rates at any level considered desirable to take traffic from the railroads, but when the railroads attempt to prevent the diversion of their traffic to these competing forms of transportation or to regain lost traffic, their proposed rate reductions may be disallowed, even though the rates are fully compensatory, in order to make sure that they receive no more than their 'fair share' of the available traffic. . . .

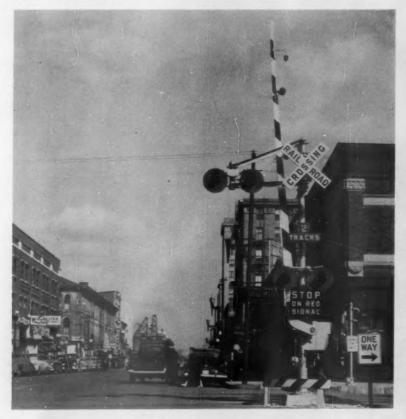
"By and large, it can be said that the railroad rate structure was based originally upon the value of the service with emphasis upon a relationship between commodities and communities. While these questions of relationships continue to be important, nevertheless, knowledge of the cost of performing a particular service is becoming increasingly important in our competition with other modes of transportation.

### Must Know Costs

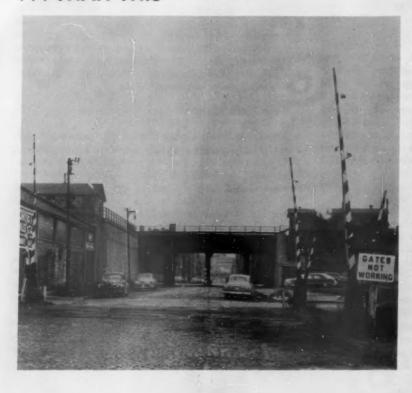
"Some railroads are better fixed than others with reference to cost accounting whereby close approximations may be given as to the cost for handling any particular traffic, but, for my book, every railroad in the United States should make a searching scrutiny as to how well it is equipped to perform this increasingly important function. I think each railroad will find that there is something to be done."

The evidence is accumulating to the point of being overwhelming that (1), if there is to be a prosperous future for the railroad industry under private ownership, then the regulators must allow the railroads to price their services to reflect their cost advantages (where such advantages exist), and that (2) railroads cannot very well make use of their cost advantages in setting rates unless they have accurate knowledge of both their own and their competitors' costs.

### THIS IS BETTER . . .



### ... THAN THIS



### QUESTION: What

### ANSWER: The Facts

Who would expect, in this mechanized, modern age, that there would still be as many as 6,000 grade crossings on railroads in the United States where manually operated gates are used or where a watchman directs highway traffic without gates?

Despite all the recent advances in crossing control equipment, however, that many crossings even today are left to such obsolete and hazardous protection.

Many such crossings are in towns where civic leaders aren't well informed about the added safety that could be had through installation of adequate automatic controls at all the highway-railway grade crossings in their communities.

In the past, railroads may sometimes have hesitated to advance automatic protection because of complications in particular track layouts or because of involved switching moves and station stops, but techniques applied in recent projects can perhaps be used to mechanize even the most complex situation.

Prerequisite, however, is that railroads and "city fathers" be sincere in wanting to achieve the increased safety through modernization of crossing protection in accordance with present-day street traffic conditions.

### How the Situation Came About

Many towns were started when the railroad was built, and grew up on both sides of the track. As population increased, numerous streets, 300 to 500 ft apart, were extended across the railroad. In towns ranging from 5,000 to 10,000 population, there may be from nine to twelve grade crossings in a distance of one to two miles.

Perhaps one of these streets was the main thoroughfare of the town, and maybe one or two other streets also handled considerable traffic. At these two or three crossings, the railroad, years ago, installed manually operated gates, and two or three

# Will Sell City Fathers on Automatic Protection?

## **About Greater Safety at Grade Crossings**

other crossings were protected by watchmen. This arrangement of protection was perhaps adequate in horse-and-buggy days.

### Traffic Has Changed

Considering the present-day volume of street traffic and the speed at which most motor vehicles are driven, a watchman on the ground may not be able to stop the traffic, and certainly takes a risk in trying to do so. In one instance, several years ago, with a train approaching, a watchman was out on the crossing with his flag and lantern. The driver of an approaching automobile was in a big hurry to get across the crossing ahead of the train. In doing so, he struck and killed the flag-

During certain periods of the day, the traffic on some streets is so heavy that vehicles run almost "bumper-toRailway Age Signal Editor John H. Dunn here voices some observations about the greater safety of modern, mechanized protection for roadrail grade crossings compared with manual gates and watchman.

The facts of the case ought to change the minds of communities which remain reluctant to go along with railroads' progressive plans for automatic installations. It is proved that modern protection:

- Meets the stiff requirements of today's vehicular traffic;
- Can handle any situation, no matter how complex; and
- ► Gives uniform, round-the-clock guardianship.

bumper." When a train is approaching the gateman has difficulty in getting the gate arms down, without being broken by a vehicle. Also he may have difficulty in getting the vehicles clear of the crossing before the train arrives.

Thus in certain respects, watchmen on the ground, as well as conventional manually operated gates, have been outmoded, not only by the coming of the motor vehicle, but

also by the volume of such traffic and the "non-stop" characteristics of present-day drivers.

Another important consideration is that, throughout the past years, gate protection, or watchman protection, has not been in effect full 24 hours each day at some of the crossings. During the 8 or 16 hours that a gateman is not on duty, at a typical crossing, a sign is displayed reading "Gates Not in Service." At

### HOW TEN TOWNS DID IT

Morrison, Ill .- Double - track main line of the C&NW crossed nine streets. A committee composed of representatives of the city, the state and the railroad, made studies of the pedestrian and vehicular traffic over each of these crossings, careful consideration being given to the locations of fire stations, schools, churches, industries and stores. Actual counts showed that practically all of the traffic was on the main streets and that there would be very little inconvenience to anyone if some of the infrequently used crossings were closed. The conclusion was to install protection at five crossings, and to close four with barricades. At an official election, the city was authorized to pay \$25,000 toward the cost of the new protection. The state paid part of the cost for protection at the one street which is a state

highway. The railroad paid the

remainder—the major portion. Lincoln, Ill.—GM&O installed gates with flashing-light signals at seven crossings and closed five crossings. Several of these crossings were previously protected by manual gates or flagmen part

Chicago—GTW installed gates at 16 crossings in the southwestern section of the city.

Moline-Rock Island, Ill,— CRI&P and CB&Q completed a project which included protection at 37 crossings and barricades to close 11 crossings.

Gibson City, Ill.—IC, NYC&StL and Wabash installed protection at 18 crossings and closed 5.

Tampa, Fla. - ACL installed automatic gates at nine successive crossings.

Mishawaka, Ind.—New York Central-dealing with 30 crossings-closed 10 and installed automatic gates with flashing-light signals at the remaining 20.

Passaic, N. J.-Erie installed automatic gates at 12 crossings, replacing manual gates and watchmen at several of these

Auburn, Ill.-The GM&O installed gates at three crossings and closed four.

Centralia, Ill.—In this city of 13,000, three railroads cooperated with the city, the State Highway Department and the Illinois Commerce Commission in a program including the closing of 12 grade crossings, the construction of an underpass for one main street, and the completion of automatically controlled protection at the 12 remaining crossings. The state paid for the underpass; the city paid \$29,-000 toward the total cost of the protection; and the railroads paid the remainder.

a typical crossing protected parttime by watchman, a sign states "Watchman Off Duty 11 p.m. to 7 a.m." This practice of protecting crossings for part of the time may have been adequate in the slow-speed horse-and-buggy days; but not today because people drive too fast to read and stop short of such signs. To a driver of today, a gate in the raised position is an indication that no train is approaching.

The problem of improving protection at crossings where watchmen or manually operated gates were in service has been solved effectively in numerous towns, and community areas in some cities, as described in many detailed articles in Railway Age and its affiliated publica-(Continued on page 36)

### The Public Relations Side of Grade Crossing Automation

### -CASE OF THE READING

"The quickest way to arouse opposition to automatic grade crossing protection," says Harry E. Hammer, director of public relations of the Reading, "is to have residents of the locality learn about your plans for the first time when they read in the newspaper that an application has been filed with the state utility commission.

"Their natural and understandable reaction is one of resentment at not being informed about the railroad's plans, and this is accompanied with hard-to-overcome antagonism."

In an increasing number of communities, greater understanding made possible by the use of a tailor-madefor-the-occasion public relations program is paying off for the Reading in two ways:

1. More automatic crossing gates being authorized by the state public utility commission because opposition to them has either disappeared or become merely token in nature.

2. More important, better community relations are being established as a result of the effort put forward. This extra benefit alone is considered worth the effort and price devoted to the "sell safety." program.

### Tell 'em First

The road's approach varies, of course, from community to community and is determined by personalities, degree of understanding, the size of the installation and other factors. In general, however, the program follows the same principles—keyed to the railroad's stated public relations policy of being good citizens and good neighbors in the communities it serves:

1. A careful survey is made of the community to determine whether or not resistance exists, and if so, to what degree.

2. Visits are made by operating and public relations personnel to explain the installations under consideration and join with community leaders in

seeking the most effective way to obtain public support.

3. A public relations program is then developed to meet the situation.

4. An application is filed with the state only after the public relations program has been completed and there is public understanding of the plan.

5. The text of the railroad's formal application is made available in the community at the same time it is filed with the utility commission.

As a result of this program, misunderstandings and resentment that might otherwise have been engendered have been avoided.

The bases for opposition by a community to automatic protection are usually:

1. Fear that automatic protection is less safe than a watchman;

2. Concern that automatic gates may tie up traffic; and

3. Concern over the jobs of watch-

These questions must be answered directly and satisfactorily, and the Reading's program deals head-on with these motivations.

As indicated above, when automatic protection appears feasible at a location, a group of representatives visits the community concerned. This group may consist of a representative of the signal department, an operating officer from the division and a member of the public relations staff.

First, the railroad's suggested plan is presented carefully to the natural opinion molders of the community—civic officials, newspaper editors, leaders of fraternal and service clubs, school representatives and other leaders. Their questions are invited and frankly answered.

Their advice as leaders is also sought.

These opinion leaders may be shown one or both of the Reading's 20minute, sound-color safety films titled "Safety at the Crossroads" and "Stop, Look and Listen." These films both deal with safety. One tells what the railroad is doing to improve its own safety; the other covers the problem of grade crossing accidents and how they can be prevented.

Though the films do not deal primarily with automatic crossing protection, they stress throughout the fact that these devices are unfailing, that they are the safest means of protection known, and that their careful inspection is a prime concern of the railroad. The latest electronic devices for controlling gates during switching operations, to avoid delaying automobile traffic, are also described.

Community leaders are remined that, when automatic crossing protection is approved, railroad representatives will work in cooperation with school officials to conduct a safety program among students.

With regard to local watchmen to be displaced, the railroad seniority system is explained to show that these employees can bid in on other jobs. Finally, on the theory that on-the-ground demonstration is an effective method to prove the worth of automatic protection, community leaders are, in some instances, taken to neighboring communities now enjoying automatic protection where they can see with their own eyes how the devices work.

### Show for All

In some cases, the suggested approach is for the railroad to present its case to the public at large. In one typical case, a local citizen assisted in arranging for a local fire hall. Through local newspaper advertisements, the entire community was invited to hear brief talks about automatic crossing protection and see the railroad film.

The Reading's experience with close teamwork of operating, legal and public relations departments working together with the community proves that the public can be convinced that technological progress on the railroads is good for them too.

### WITH CTC ON THE ERIE . . .

# "High Green" Moves Trains Fast

Single-tracking short sections of double track (20 to 30 miles) used to be frowned on, despite economies in maintenance, because trains had to slow up entering and leaving the single-track stretches. That objection no longer holds. The Erie is running trains at maximum authorized speeds into and out of a 21.8 mile section of single track—the first of a series of projects planned for the road's main line between Marion, Ohio, and Hammond, Ind.

Two years of satisfactory experience with similar set-ups in New York prompted the road to use equilateral turnouts in this prototype installation of singled-up track and traffic control, between Aldine, Ind., and Pershing, where rail renewal was due on one track.

The 248-mile division between Marion, Ohio, and Hammond, Ind., where traffic averages 20 trains a day, will be converted to single track as soon as practicable, additional sections to be singled up as track needs to be renewed. Currently rail renewal in this territory costs about \$30,000 per track mile.

Maximum speeds of 75 mph (passenger) and 50 mph (freight) are maintained on the Aldine-Pershing section through use of No. 24 frogs and 29-foot curved Samson points in the turnouts at the ends of the single track. Train movements throughout the territory are regulated by Union Switch & Signal equipment. "High green," greenover-red aspect, authorizes maximum speed movement at ends of double track.

So smooth are these turnouts, the road reports, that coffee stays in the cups when passenger trains move over them at high speeds.

Passing is made possible in the Aldine-Pershing strip through use of 3.2 miles of old westbound track left in place between Delong and Monterey, the approximate midpoint. Turnouts at the sidings are No. 20 with 30-foot points, so trains can enter or depart at speeds up to 30-40 mph. Signaling is set up to bring trains up to and through the turn-

outs at such speeds, and to permit two trains headed in the same direction to use the siding simultaneously.

Four derails and two crossovers were eliminated at Delong where a north-south branch of the Pennsylvania crosses, the interlocking being reduced to signal protection for the crossing.

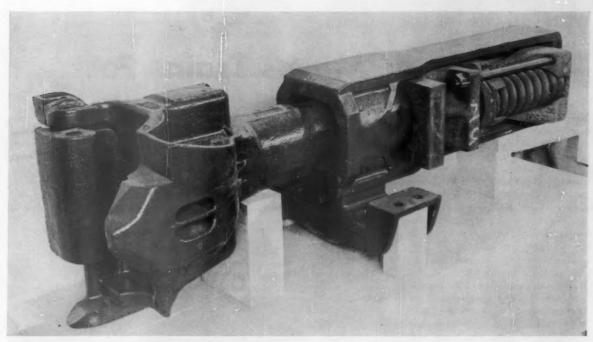
At Rochester, 3.6 mi east of Pershing, the Erie is crossed by the Nickel Plate, this crossing being protected by an interlocking. In order to have a place to stop a train on either main track, both main tracks were left in place through Rochester and on west to the end of single track at Pershing.

### Using equilateral turnouts for . . .



### Single-tracking short segments





ROTARY COUPLER and yoke in the applied position.

# **Cars Tailored for Taconite**

Lading cannot touch structural members on 350 open-top cars built by ACF for carrying ore on the Reserve Mining Company's 47-mile railroad between Babbitt, Minn., and Silver Bay on Lake Superior.

Though built for a special service, these 95-ton cars have a number of design innovations that are applicable to freight cars generally, including the application of skip welding for easy parts replacement, tapered inside sheets for easier dumping, and one-piece casting of rear draft lug, bolster center filler and center plate.

The product to be handled is taconite, a low-grade iron ore, which

is extremely hard and abrasive. This condition led to keeping the load-carrying members from coming in contact with the lading. This rock is lighter than Mesabi iron ores, making it practicable to use a car with greater cubical capacity.

The car body is of all-welded design. Members that contact the



NEW BODY FEATURES are applicable to all types of open top cars.



CLOSE-UP of one-piece combination rear draft lug, bolster center filler and center plate.

taconite (the floor, sides and ends) are skip-welded to the underframe and superstructure for ready replacement. Skip-welding permits this to be done by working an air chisel in the voids between the welds to knock out the weld spots holding the sheet to the structural member.

### Cars Are Dumped While Coupled

In place of the AAR combination rear draft lug and bolster center filler, the cars have a steel casting, which, in the one integral piece, incorporates these two members plus the center plate. This construction is stronger and eliminates difficulties experienced in making the combination rear draft lug and bolster filler casting contact both the roof of the center sill and the upper face of the bolster bottom cover plate.

These cars will be emptied by turning them over on a car dumper without uncoupling from the cut. A rotary coupler has been developed and applied to the B end of each car to permit this operation. A modified Type F coupler is used on the A end. With this unloading method, the train line and air reservoir can be kept fully charged at all times, and cars are moved through the whole unloading area without uncoupling.

To facilitate dumping frozen lading, both sides and ends of the car body taper outward from the bottom to the top. Furthermore, there are no ribs or rivets projecting on the inside of the car body to resist the release of the lading.

The cars are equipped with automatic slack adjusters and the emptyand-load brake with a 12-in, cylinder. The locomotives are equipped with the pressure maintaining feature on the brake valve. This permits handling heavy trains safely down a 1.5 per cent grade and eliminates delays for setting up and turning down re-

The trucks are ASF Ride-Control design with clasp brakes, 36-in. multiple wear rolled steel wheels and Hyatt roller bearings. The trucks have a 100-ton nominal capacity, a 250,000-lb load limit, and a wheelbase of 5 ft 10 in. They weigh 12,000 lb each.

The cars have a light weight of 56,500 lb, an overall height of 10 ft, a coupled length of 29 ft 10 in., an inside length of 25 ft 8 in. and an inside width of 9 ft 9 in. at the top. Cubic capacity, level, is 1,569 cu ft. With a 12-in. heap, it is 1,818 cu ft.

### Railroading

### After Hours

### Freight Car Supply

President William White of the D&H has given me a copy of a compilation he has made of freight car ownership, by individual railroads and by districts, comparing the situation of May 1, 1956, with that of September 1, 1945.

The Eastern District is shown to be down 32,285 cars; Allegheny down 76,683; Pocahontas down 151; Southeast up 20,451; Northwest down 18,826; Central West up 23,935; Southwest up 23,972; The decrease for the Class I railroads as a whole is 64,696. The Canadian roads are up 19,150.

There are some very startling ownership changes by individual rail-roads—which I will not record here, because it doesn't seem to me that it is accurate to judge the adequacy of the car supply of an individual railroad, except in relation to the degree to which its on-line loadings have gone up or down.

This car supply problem is as important and pressing as any of the many critical issues which face the railroads.

President Fred Gurley of the Santa Fe spoke very candidly about it in James G.



Editor, Railway Age

his notable speech to the Accounting Division a few weeks ago.

He said that "nothing has worried me more" than the shortage of freight cars. The railroads, he said, are concerned because their share of the nation's freight ton-mileage has declined to only 50 per cent of the total, but, he observed, "we would have handled more of the total intercity traffic in 1955 if we had had more freight cars."

"Why is it that we do not have enough freight cars?"—he asked. "Financial ability of some railroads is one answer. Improper depreciation allowances is a contributing factor to that. This has been offset to some extent, but not entirely, by certificates which permit a certain degree of accelerated amortization. I am one of those who believes that another contributing factor is that the per diem charge for the use of freight cars is lower that it should be."

### "Free Market" an Answer?

I was trying to explain this car supply situation to a business man who knows very little about railroading—and his comment was a challenging one. What he said was: "Why don't the railroads try free enterprise for a change—by that I mean, why don't they trust the free market—let any car owner charge whatever rental he can induce receiving lines to pay him, in order to get the revenue from the loaded cars offered in interchange?"

There are, of course, reasons why this particular solution would be impracticable for the railroads—as long as they operate as a nationwide system of transportation, any railroad taking any traffic for any destination. But holding up the model of a completely free market sometimes offers a pretty good yardstick with which to gage the deficiencies of a situation which is being handled in a highly regulated or highly traditional way.

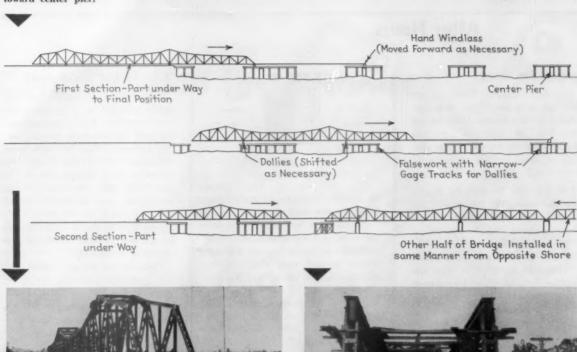
When appeals to patriotism and community spirit fail to produce adequate results, a slightly greater reliance on economic motives might prove helpful.



LOOMING over river bank, first section is drawn out toward center pier.

Chilean engineers whip summer floods and winter rains by . . .

# Pulling a Bridge

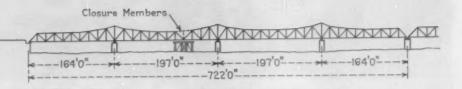


NARROW-GAGE track and dollies (circled) facilitate

ERECTION of smaller part of section proceeds during windlass operation.

Material for this article was obtained by Max K. Ruppert, president of Poor & Co. and of the P. & M. Co., during recent travels over the Chilean State Railways. He was impressed by the construction methods employed on this project and offered the data and pictures to Railway Age.

# **Together**



Conventional bridge-building techniques had to be set aside by engineers of the Chilean State Railways when they replaced a 70-year-old span across the Maule river as part of a line improvement program.

Winter rains and summer floods from melting mountain snow swell this and other Chilean rivers into torrents that defy mid-stream construction work, sharply curtailing available working time.

An "endwise shift" method was used by the railway's engineers, who erected the bridge in two continuous sections, each 722 ft long, on opposite banks of the river—then drew the sections out over the river until they were linked on a center pier.

Falsework construction for the entire project was ruled out by the short working season, but, since the new bridge was to parallel the old structure it replaced, it was possible to build it on the approaches back of the abutments. This procedure, however, made it necessary to suspend a considerable length of the bridge at the ends without support during the "pulling together." To provide the necessary strength to withstand this cantilever action, the continuous truss type of structure was selected.

Each section has four spans and is supported on three intermediate piers, adjoining ends resting on the



LINK-UP on center pier is final step over now near-dry river bed.

midstream pier. Top-lateral bracing is provided in two panels over each intermediate pier with pony-type trusses elsewhere. Piers and abutments extend 46 ft below river bed.

Tailroom for work on the two sections—which were built simultaneously—was not enough to accommodate the full 722 ft, so each section was built in two parts, 427 and 295 ft long respectively.

Movement of the sections after erection was on dollies over narrow-gage track that was laid on the banks under each truss and was extended on falsework a short distance ahead of the abutments. Similar track sections were also placed on

falsework on both sides of each pier.

Power was provided by a hand windlass which was first placed on the second pier from the abutment and was then moved ahead to the center pier in three stages, the dollies also being relocated in prearranged sequence as the structure advanced.

First and longest "pull" was made until the forward end of the section was over the first pier's falsework, with subsequent "pulls" of 33 and 66 ft increments finally moving the section to its final location, where, after the dollies were removed, it was lowered to bear on the piers with aid of four 200-ton jacks. Each of the four parts moved similarly.



HOW THEY WORKED ...

WET, DRY, AND OILED rails were used in the tests as bases for comparing various grades of sand and silica.

# Getting Less Slip with Less Sand

Less slipping on less sand has been the immediate result of an extensive research and test program conducted by the Southern Pacific. Laboratory and road tests have been part of this program, which is continuing even though SP people are satisfied with the improvements they have now made in the sanding equipment itself.

Although sanding systems have been in use since soon after the introduction of the steam locomotive, SP found little basic information available on the performance of sanding equipment in actual service. Problems confronting the railroad, and objectives of a joint committee from the motive power and engineering departments were:

 Reduction in fouling of ballast, which becomes a major road bed and track maintenance problem estimated to cost SP at least \$500,000 annually.

 Reduction in amount of locomotive sand used, which with purchasing, transporting, drying and storing charges costs the road about \$450,000 annually.

· Reduction in wheel slippage by

more efficient sand application reducing damage to equipment and

The joint committee did actual application engineering with the benefit of two laboratory research programs previously sponsored by the SP. In 1948 from Battelle Memorial Institute and in 1954 from Stanford Research Institute had come reports indicating that railroads had not been wrong in choosing sand as the "antilubricant" to improve driverrail adhesion.

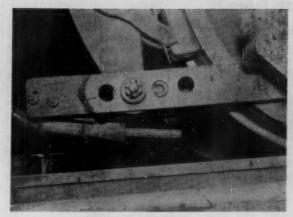
Stanford had found, and SP road tests had confirmed, that silica flour with a fineness of 100 to 325 mesh is the most effective solid material for wheel slip control. In this form it is difficult to handle in storage and on the locomotive—not feasible for actual use. However, ordinary 65 mesh silica sand is reduced to silica flour when ground between the locomotive wheel and the rail. Sanding equipment needs only to deliver the sand to this point.

Laboratory work showed that a layer of this silica sand only one particle thick effectively controls wheel slip. Quality is of extreme importance. Conditions which can reduce the sand's effectiveness as an "antilubricant" are improper screening, and presence of clay, fines and moisture.

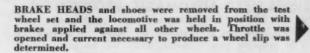
Preventing wheel slip on locomotives operating at 14 mph, a critical speed for slippage on heavy grades, can be done with ¼-lb of sand per wheel per minute, if all of this sand is utilized. Wind losses and shifts of the wheel with respect to the rail were compensated by providing for 50 per cent losses. This meant that the effect would be secured on the delivery of ½ lb of sand per minute in front of each locomotive driving wheel.

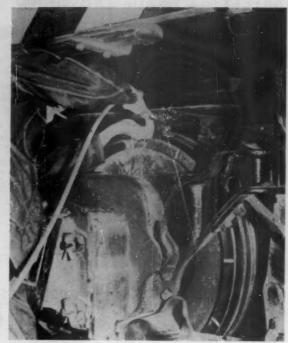
### Sander Changes

It was found that present sanding equipment, designed to deliver 3 to 5 lb per min, can be modified easily to provide the lesser amount of sand and in a sanding pattern which works effectively. Correct placement of the reduced amount of sand can be done only by assuring alinement



THE RIGHT AMOUNT in the right place is what SP wants to do with locomotive sand to reduce wheel slipping and sand consumption. The SP-designed sand delivery pipe, shown attached to the brake rigging of a diesel locomotive, is one step in this program.





of the sand pipes. It was established that the smaller quantity of sand is more effective than excessive amounts in producing the desired results.

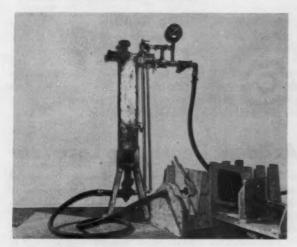
The committee recommended that the air tubes on all Prime sand traps be lengthened from 2½-in. to 3-in. This means that the end of the tube will not always be covered with sand at its normal angle of repose, and is

the only way to make the desirable small delivery rate possible. The orifice in the metering screw of the Prime control valve was enlarged to provide a larger volume of air during sanding and a consequent higher velocity through the restricted path. The result was sand velocity at the nozzle adequate to place sand at the wheel-rail contact point and to offset the effects of side winds with veloci-

ties even greater than 35 mph. A secondary result of the orifice enlargement has been a reduction in failures due to plugging with minute particles of compressed air stream.

Along with providing an air velocity to assure adequate delivery, the SP is applying a newly designed nozzle which has been found to produce a delivery pattern with a mini-(Continued on page 44)

#### WHAT THEY FOUND OUT ...



SAND TRAPS and various nozzle designs were ins:alled on this test stand to evaluate changes made in the arrangement of components and in the air delivery rate.



PATTERN produced by SP sand nozzle during a twosecond delivery interval on the test stand. Plate was coated with a substance to hold sand in position.

#### SAFETY AT GRADE CROSSINGS . . .

(Continued from page 28) tion, Railway Signaling & Communications,

In towns where trains stop at stations or make switching moves, special circuits are being used to cut out the protection and raise the gates if no switching move over a crossing is imminent, even though a train is close to it. This obviates unnecessary delay to street traffic. If passenger trains are operated at speeds much faster than freights, special devices measure the speed, and control the gates so that street traffic is delayed no longer for a freight than for a passenger train. Numerous improvements in these special controls have been devised in the last few years so that most any problem can be solved. A point of importance is that these automatic controls are on duty 24 hours every day.

#### Some Crossings Can Be Closed

This complete protection in the form of short-arm gates with flashing-light signals, including the special automatic controls that may be required by local conditions, may cost considerable money to install and to maintain. To help meet this cost problem, numerous towns, in order to secure the best form of protection at all active crossings, have closed some of the crossings which are no longer needed.

The closing of some streets and installation of short-arm gates and

flashing-light signals at the remaining crossings in a town has proved to be a means for reducing the number of persons killed or injured. The Illinois Commerce Commission has records of accidents for the 10 years before and after some projects were completed. At crossings in Moline-Rock Island, for example, 34 people were killed and 45 injured in the 10 years before, compared with 2 killed and 14 injured in the 10 years after, such installations. At Lincoln, 26 were killed and 24 injured in the 10 years before, compared with none

killed and none injured. At Gibson City, 17 were killed and 15 injured in the 10 years before, compared with none killed and 3 injured in the 10 years after. The overall totals for the three cities represent a 97.4 per cent reduction in deaths.

During the last nine years, automatically controlled short-arm gates with flashing light signals have been installed at an average of 408 crossings annually. A high percentage of these installations were made in towns to replace manually operated gates and watchmen.

#### 6,000 CROSSINGS NEED AUTOMATIC PROTECTION

On a recent automobile trip, a man interested in crossing protection counted 35 crossings in towns protected by manually operated gates. According to Interstate Commerce Commission statistics applying to Class I line-haul and switching and terminals railroads, 2,230 crossings are protected by watchmen less than 24 hours daily, and 1,086 crossings are protected by watchmen 24 hours daily.

The statistics list 577 crossings protected by gates in service less than 24 hours daily. Presumably these are manually operated gates. Also the statistics lists 4,441 crossings pro-

tected by gates in service 24 hours daily, but no information is given to show how many are manually - operated and how many are controlled automatically.

A conservative estimate is that at least 2,000 of these are manually operated, which, added to the 577, makes 2,577 manually operated. Adding this 2,577 to the 3,316 protected by watchmen, makes an approximate total of 5,893 crossings on Class I roads at which the oldtime, manually operated gates or watchmen could be replaced by modern, automatically controlled protection.

(Continued from page 13) the day, a differential of 25 cents will be added to the rate."

Referee Mortimer Stone, who sustained the claims under this rule, rejected a Central contention that the 25-cent differential was intended to apply only to engines not equipped with foot-boards, etc., for yard service.

Carrier members of the board dissented with Mr. Stone's ruling. In a dissent written by George H. Dugan, they charged that Mr. Stone erred when he interpreted the rule to mean that a locomotive, if used in road service is, per se, a road locomotive and that if it is then used in yard service, subjects the railroad to the additional 25 cents a day.

"The all-purpose, or dual purpose, diesel locomotives are equipped in every respect for yard service, and are designed for use in yard service as well as road service," the dissenters argued. "There is no more basis for a holding that these (dual-purpose) locomotives are road loco-

motives used in yard service, than there would be in holding that they are yard locomotives used in road service. The mere fact that they are for use in both classes of service certainly does not serve to make them road locomotives within the meaning of the rule."

## Crossing-Accident Deaths Up Last Year

More persons were killed last year than in 1954 in accidents at railhighway grade crossings. There were also increases in injuries and in the number of accidents.

Fatalities totaled 1,322, compared with 1954's 1,161; injuries totaled 3,904, compared with 3,323; and

accidents totaled 3,607 compared with 3,090. The 1954 record was in all respects the best of the 1946-1955 decade.

These and other crossing-accident data were included in a preview of the Interstate Commerce Commission's forthcoming compilation, which appeared in the June issue of "Transport Economics," publication of the commission's Bureau of Transport Economics and Statistics.

The number of 1955 crossing accidents per million vehicle registrations was 58.2, up from 1954's rate of 53. Meanwhile, however, fatalities per accident were down from 1954's 0.376 to 1955's 0.367. Injuries per accident were up from 1.075 to 1.082.

Sixty-five per cent of the 1955 accidents resulted from trains striking highway vehicles, while 35% resulted from motor vehicles running into sides of trains. Daylight accidents, which represented 55.8% of the total number, accounted for 65.7% of the fatalities and 52.8% of the injuries.

Trucks, which represented 15.9% of the registrations, were involved in 21.4% of the accidents. Buses were involved in 12 of the accidents.

#### **February Accidents**

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of railroad accidents for February and this year's first two months. The compilation, subject to revision, follows:

lows:				
Item	Feb	rugry	2 month with F 1956	ebruary
Number of train ac-	770	653	1,542	1,312
Number of accidents resulting in casual-	41	37	87	78
Number of casualties in train, train-serv- ice and nontrain accidents:				
Trespassers: Killed	41	42	95	86
Injured Passengers on trains: (a) In train accidents*		45		91
Killed Injured (b) In train-service	14 244	74	43 394	120
accidents Killed Injured	135	105	2 286	279
Travelers not on train				
Injured Employees on duty:		92	174	193
Injured 1 All other non-	,492	20 1,284	3,012	38 2,653
trespassers:** Killed Injured Total — All classes	93 461	100 496	236 1,040	269 1,024
of persons: Killed	179	164	427 4,996	398 4,360
AT-ul	adles .			dan 21

rrain accidents (mostly collisions and derainments) are distinguished from train-service accidents by the fact that the former caused damage of \$375 or more to railway property. Only a minor part of the total accidents result in caucities to presons, as noted above. \*\*Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Killed ...... 95 94 240 24 Injured ..... 301 355 725 79

### **New Truck Brake Rules in Effect**

First of the new truck regulations prescribed recently by the Interstate Commerce Commission became effective June 30. It requires that air and vacuum reservoirs of towing vehicles be safeguarded against leakage in the connection to the source of air or vacuum.

Other prescribed rules, which become effective from time to time, include the following:

After August 31, every new vehicle, and after December 31, every vehicle towing an air-braked trailer, must have both automatic and manual means of activating emergency features of the trailer brakes. After December 31, every vehicle towing a vacuum-braked trailer must have a

second device for emergency trailer braking.

Air brake systems installed on towed vehicles manufactured after August 31 must have devices to safeguard the air supply against backflow through the supply line. After December 31, every towing vehicle using vacuum brakes must have an audible or visible low-vacuum warning device. On and after January 1, 1957, every towing vehicle must have means for keeping its brakes operative in the event of breakaway.

The new regulations came out of the rule-making proceeding, Ex Parte No. MC-40, instituted by the commission last November (Railway Age, Nov. 28, 1955, p. 10).

## **Truck Trip-Lease Ban Off Indefinitely**

The Interstate Commerce Commission has now postponed indefinitely the effective date of its long-pending rules prohibiting trip-leasing of motor trucks and rental payments of the revenue-splitting type. The rules, prescribed in 1951, have been postponed from time to time, the latest effective date having been July 1.

The postponement order, in Ex Parte No. MC-43, said it would be "undesirable to the public interest" if the rules were to become effective while Congress is considering proposed legislation dealing with the matter. The proposed legislation, which would trim the commission's power over leasing arrangements, is embodied in a bill, S.898, which has passed the Senate and is now on the House calendar, having been reported favorably from the House Committee on Interstate and Foreign Commerce.

## **Loading Estimates Off by Wide Margins**

Regional Shippers Advisory Boards underestimated car loadings of last year's fourth quarter by only 2.4%, but that composite result reflected 15 overestimates by commodity groups, ranging from 0.1% to 59.8%, and 17 underestimates ranging from 0.5% to 18.2%.

That is the showing of the latest check of estimates with actual loadings which has been issued by the Car Service Division, Association of American Railroads. The overestimate of 59.8% was for the Hay, Straw and Alfalfa group, and the 18.2% underestimate was for Ore and Concentrates. By regions, there were five overestimates and eight underestimates. The former ranged from 0.4% for the territory of the Southwest board to 15.6% for the Pacific Northwest. The underestimates ranged from 2.1% for the Southeast to 8.2% for Great Lakes.

## **Rail Car Urged for Atom Food Tests**

Plans for a 173-ton atomic foodprocessing railroad car have been disclosed by the Engineering Research Institute of the University of Michigan.

The report estimates the irradiation unit and car would cost \$93,-000 to build. The car would house portable gamma-irradiation apparatus designed to deliver a dose of gamma rays sufficient to inhibit sprouting in onions and potatoes, to sterilize insects infesting grain and cereal products, and to sterilize Mexican fruit fly eggs and larvae. This particular dosage called subradiopasteurization, would not appreciably affect storage life of fresh foods. It would require a much higher dosage to extend the unrefrigerated storage life of fresh food stuffs, the institute explained.

The report says the plan for such a car is "economically feasible," and proposes that the preliminary design set forth should be completed in detail. Such an irradiation facility should be constructed and operated as a demonstration unit by 1958, the report adds.

Fabricated steel plates from 8 to 16 in. thick would be used to shield radiation and would also be main structural members of the car, thus saving the weight of a conventional underframe. The car would be 50½ ft long and a maximum of 15 ft high over the rail.

Four standard freight car trucks would be used to support the car's weight. They would be mounted in pairs on two span bolsters to keep axle loading within track limits on secondary lines.

Food stuffs would move through the car by conveyor to receive their "dosage" at a rate of 5.4 tons per hour.



#### Mixing by Pushbutton

"Heart" of Dearborn Chemical Company's new Lake Zurich, Ill., compounding plant is this electrically operated control panel. Pushbuttons enable the operator to prepare complicated chemical formulas as simply as dialing a telephone number. Chemical ingredients are fed from storage bins in the proper quantity, and compounded automatically.

#### 13 Roads Paid Safety Fines in April

Thirteen railroads in April paid fines totaling \$3,700 and costs on 37 counts of violation of the Safety Appliance Acts, the Interstate Commerce Commission has reported.

Largest amount was paid by the Grand Trunk Western—\$800 on eight counts. Next was the Detroit & Toledo Shore Line, which paid \$500 on five counts. The commission's statement also showed that the only April fine for violation of the Hours of Service Law was one of \$100, paid by the Central of New Jersey.

#### New 530-Acre Industrial Site Established in Ohio

Establishment of a new 530-acre industrial district near Lima, Ohio, was announced recently by David E. Smucker, president of the Detroit, Toledo & Ironton. The site, adjacent to a large engine plant being built by Ford Motor Company, has been acquired by the DT&I "as a prospective industrial home for a good many worthwhile companies," Mr. Smucker said.

Sites or facilities in the district may be purchased outright, leased for a long term, leased with option to buy, or purchased on installments, according to Mr. Smucker, who is also president of D.T.I. Enterprises, Inc., a DT&I subsidiary established to develop industrial areas.

# New Assignments To ICC Divisions

The Interstate Commerce Commission has made new assignments of its members to its various divisions. This was done following the swearing in of Commissioner McPherson as successor to former Commissioner Johnson.

Division 1 now consists of Commissioners Tuggle (chairman), Minor and McPherson; Division 2—Commissioners Freas (chairman), Winchell and Murphy; Division 3—Commissioners Clarke (chairman), Hutchinson and Walrath; Division 4—Commissioners Mitchell (chairman), Clarke and Hutchinson.

The commission's Committee on Legislation is headed by Commission Chairman Arpaia, and its other members are Commissioners Clarke and Minor. Commissioner Mitchell succeeds Colonel Johnson as the commissioner through whom the Bureau of Finance reports. Commissioner Tuggle, instead of Mr. Mitchell, is the commissioner through whom the Bureau of Motor Carriers reports. Commissioner Walrath, instead of Mr. Tuggle, is the commissioner through whom the Bureau of Water Carriers and Freight Forwarders reports.

## Supply Trade

Alco Products, Inc., has announced the return from Naval service of Del Thoman, and his assignment as sales representative in the San Francisco area. John A. Langford has been appointed to the Los Angeles sales staff. Both will handle the complete product line.

W. T. Robinson has been named head of a newly formed fuel oil division in the petroleum laboratory of E. I. du Pont de Nemours & Co. He will be responsible for technical service on diesel oils and other fuels.

Warren Soap Manufacturing Company has changed its name to Warren Chemical Manufacturing, Inc. There has been no change in organization.

Don M. Davis has been named eastern sales and service engineer, Paxton-Mitchell Company.

Philip Carey Manufacturing Company has appointed F. W. Evinger manager of railroad sales for both Carey and The Lehon Company products, with office at Bellwood, Ill. He was formerly supervisor of railroad sales for Lehon.

The name of Safety Car Heating & Lighting Co. has been changed to Safety Industries, Inc.

J. W. Greene, district sales manager of Crane Company, at Long Island City, N.Y., has been named director of industrial sales at Chicago. W. A. Burbine, district sales manager at Chicago, has been made director of heating sales there. He has been succeeded by Thomas D. Kelly, Chicago branch manager. Darrell R. Nordwall, Los Angeles branch manager, has been made manager of the east coast district, and Charles H. Lovelace, Detroit branch manager, named manager of valve and fitting sales.

Robert H. Weeks, Jr., San Francisco district manager, Edison Storage Battery division of Thomas A. Edi-(Continued on page 40)



DIRECT from railroad flat ears to trailership, these piggy-back trailers are wheeled . . .



OVER mobile ramp designed by Army Transportation Corps in t-o-f-c-fishyback demonstration.

# **Marriage of Conveyances**

Union of erstwhile competitors shown possible in Army demonstration of modern equipment

Savings in time, damage claims and labor costs are suggested in a combination of trailer-on-flat-car service with "fishyback," its seagoing counterpart, as recently demonstrated by the U.S. Army Transportation Corps.

Using a portable ramp specifically designed for the purpose, the Army showed in an exhibition at its Fort Eustis, Va., test site, that loaded truck-trailers can readily be moved from piggyback flat cars direct to stowage aboard ship.

This potential blending of rail transport with ship movement was discussed in an article in Railway Age, Apr. 16, p. 8, which dealt with many aspects of the so-called fishyback innovation and refinements.

In its demonstration, the Army moved four standard trailers from two Pennsylvania Railroad 75-ft t-o-f-c flat cars onto a 64½-ft "trailership" designed and operated by TMT Trailer Ferry, Inc. The Army emphasized that, since there was no need to break bulk in the roll-on, roll-off operation at either end of the ship's voyage, the cargo remained "on wheels" from shipper to consignee.

Trailers, moved aboard ship with standard truck power units or with a more maneuverable tractor, can be loaded back onto flat cars at the ship's destination for further rail movement, or might be moved off the ship for immediate highway routing to the ultimate consignee.

Another phase of the Transportation Corps show involved use of the "Adapto" flat car, developed by ACF Industries, and the cargo containers used in connection with the car.

The Army — a longtime advocate of cargo containers to ease shipside loading — demonstrated that the piggyback-fishyback combination could be applied here by moving the specially constructed containers direct from flat cars to the trailer-ship with fork lift trucks, or by crane.

Possibility of transfer by the same means from ship to flat car or flatbed truck for rail or highway movement at the ship's destination, also was indicated.



"ADAPTO" containers, brought to shipside on ACF-developed flat car, are loaded . . .



BY CRANE (or fork truck) next to Army "Conex" units (rear) in another transport innovation.

(Continued from page 38)

son, Inc., has been appointed New York district manager, succeeding Frederick D. Van Lew, who died recently. The new district manager at San Francisco is Robert S. James, who has worked both as a field and service engineer there.

Paul A. Benoit and Albert L. Timm have been assigned to A. M. Byers Company's New York division office as field service engineers.

#### Financial

Louisville & Nashville.—NC&StL Merger.—ICC Examiner Paul C. Albus has recommended that the commission approve the application of the Louisville & Nashville to acquire the Nashville, Chattanooga & St. Louis through merger of the latter into the former. The merger would be accomplished by L&N issuance of 384,000 shares of \$50-par common stock to be exchanged for 256,000 shares of NC&StL stock on a 1½-to-1 ratio. Control of the surviving corporation by the Atlantic Coast Line would be authorized, under the examiner's recommendation, through ACL ownership of 35.2% of L&N stock.

#### **Applications**

SALTIMORE & OHIO.—To assume liability for \$3,600,000 of equipment trust certificates, fourth and last installment of a proposed \$14,700,001 issue, the whole of which would finance in part acquisition of 2,500 freight cars at an estimated total cost of \$18,467,000 (Railway Age, Nov. 28, 1955, p. 40). The certificates would mature in 15 equal annual installments, beginning January 1, 1957. They would be sold by competitive bids which would fix the interest rare.

80STON & MAINE.—To assume liability for \$4,200,000 of equipment trust certificates, second installment of a proposed \$18,510,000 issue, he whole of which would finance equipment expected to cost \$23,151,130 (Railway Age, March 5, page 56). The certificates would mature in 15 annual installments. They would be sold by competitive bids which would fix the interest rate.

DENVER & RIO GRANDE WESTERN.—To assume liability for \$2,820,000 of equipment trust certificates to finance in part acquisition of 12 1,750-hp diesel-electric locomotive units and 200 freight cars at an estimated total cost of \$3,778,600. The locomotives would be acquired from the Electro-Motive Division, General Motors Corporation, at an estimated unit cost of \$180,500. The freight cars, acquired from ACF Industries, Inc., would include 100 box cors at \$6,686 each and 100 flot cars at \$7,440 each. The certificates would mature in 30 semiannual installments of \$94,000 each, beginning January 1, 1957. They would be sold by competitive bids which would fix the interest rate.

CHESAPEAKE & OHIO.—To assume liability for \$8,100,000 of equipment trust certificates, the second and final installment of a proposed \$12,900,000 issue, the whole aif which would finance in part acquisition of 60 locomotives and 486 freight cars (Railway Age, May 21, p. 118). The certificates would mature in 15 annual installments of \$540,000 each, beginning June 4, 1957. They would be sold by competitive bids which would fix the interest rate.

NEW YORK, CHICAGO & ST. LOUIS.—To modify its pending application to make it a request for authority to issue \$3,750,000 (instead of \$4,620,000) of equipment trust certificates (Railway Age, May 14, p. 54). Because their delivery will be delayed, six dissel-electric locomotives have been eliminated from equipment to be financed by the proposed issue. On the modified basis,

the certificates would mature in 30 semiannual installments of \$125,000 each, beginning December 1. They would be sold by competitive bids which would fix the interest rate.

NORTHERN PACIFIC.—To assume liability for \$7,725,000 of equipment trust certificates to finance in part equipment (listed below), expected to cost \$9,655,228.

	rcred 10 cost 47,000,226.
Estimated Unit Cost	
OIIII CON	10 1,750-hp diesel-electric road switching locomotive units
\$171,222	(Electro-Mative Division, Gen- eral Motors Corporation)
	8 1,750-hp diesel-electric road
170,550	switchers (Electric-Motive)
	6 1,750-hp diesel-electric road
178,001	switchers (Electro-Motive)
	6 1,200-hp diesel-electric switch-
124,062	ers (Electro-Motive)
	5 1,200-hp diesel-electric switch-
118,946	ers (Electro-Motive)
8,363	10 50-ft box cars (NP shops)
	The certificates would mature in 1 stallments of \$515,000 each, beginn
	, 1957. They would be sold by co
	ds which would fix the interest rate

READING.—To assume liability for \$6,600,000 of equipment trust certificates, the first installment of a proposed \$12,000,000 issue, the whole of which would finance acquisition of 1,900 freight cars at an estimated total cost of \$16,020,000.

Description Estimated

and Builder	Unit Cost
1,000 70-ton hopper cars (Bethlehem	
Steel Company)	\$7,950
50C 70-ton gondola cars (Bethlehem)	
400 50-ton box cars (ACF Industries, In	(c.) 8,300
The certificates would mature in	30 semi-
annual installments, beginning Nove	
They would be sold by competitive b	sids which
would fix the interest rate.	

ST. LOUIS-SAN FRANCISCO.—To issue \$61,-600,000 of 50-year, 5% income debentures, series A, and 154,000 shares of common stock, to be exchanged for 616,000 shares of 5% preferred stock, series A. Exchange would be on the basis of \$100 of new bonds and ¼ share

of common for each share of preferred. There would also be a cash payment equal to the unpaid portion of the 1956 preferred dividend, which has been declared.

SOUTHERN PACIFIC.—To assume liability for \$9,660,000 of equipment trust certificates to finance in part acquisition of equipment expected to cost \$12,880,000.

	Description	timate
	and Builder U	nit Cos
9	1,750-hp diesel-electric freight loco-	
	motive units (Electro-Motive Divi-	
	sion, General Motors Corporation)\$	181,78
10	1,750-hp diesel-electric freight loco-	
	motive units (Electro-Motive)	180,537
15	900-hp diesel-electric switching loco-	
	motive units (Alco Products, Inc.) .	105,090
407	box cars (Southern Pacific shops)	7,877
366	box cars (SP shops)	7,750
120	hopper cors (ACF Industries, Inc.)	7,593
72	gondola cars (SP shops)	11,495
TI	ne certificates would mature in 15	annua
	the continuous money was the factor	

installments of \$644,000 each, beginning May 1, 1957. They would be sold by competitive bids which would fix the interest rate.

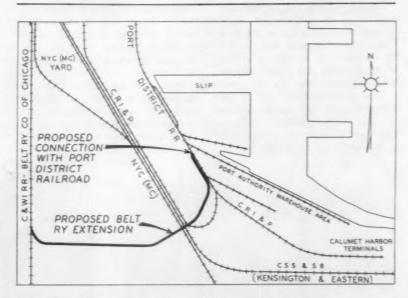
WESTERN PACIFIC.—To issue 11,928 shares of its common stock for distribution to present holders as a 2% stock dividend. The distribution would be on the basis of one share for each 50 now held.

#### **Authorizations**

CHICAGO SOUTH SHORE & SOUTH BEND.—To issue and sell without competitive bids \$1,500,000 of 5% sinking fund notes due April 1, 1971, proceeds to be used for construction of a substitute main line in Lake County, Ind.

JOHNSTOWN & STONY CREEK.—To issue an unsecured demand note for \$375,000 to replace o balance of that amount from a former note to the parent United States Steel Corporation.

VIRGINIAN.—To procure authentication and delivery of \$6,740,000 of series E 316% first lien and refunding mortgage bonds, due December 1, 1980, to reimburse its treasury in part for capital expenditures.



#### Belt of Chicago Plans Port District Trackage

The Belt of Chicago has applied for ICC permission to construct a 7,000-ft rail connection with the Lake Calumet Port District's railway yards near 128th street and Doty avenue, Chicago (see map). The new line, including two overpasses, would cost an estimated \$3 million. The Belt, owned by 12 other railroads, originally planned to serve the new port through a trackage-rights agreement

with the Rock Island. "Our request for trackage rights was refused," L. A. Evans, president of the Belt, said. The Illinois Central also has announced its intention to serve the Port District through its subsidiary, the Kensington & Eastern, which stretches from Kensington (115th street, Chicago), to the Illinois-Indiana state line. Chicago South Shore & South Bend trains use the line.

# Handy Reference to Railroad Associations

AIR BRAKE ASSOCIATION.—Luvrence Wileau, Room 627, 80 E. Jackson Blod., Chicago 4. Arausal meeting, September 10-12, Hotel Sharman, Chicago, Alliam Ramway Sereya Association.—C. F. Weil, P. O. Box 5522, Chicago 80. Annual meeting, September 10-12, Hotel Sherman, Chicago.

AVERICAN ASSOCIATION OF BAGINGO TRAFFOR MARKET AND ASSOCIATION OF BAGINGO FRANCES.—T. R. Stanton, 1450 Railway Exchange Bidg., St. Louis 1.

St. Louis I.

American Association or Passissers Rare Mex.—
R. L. Pessentini, 701 McCommick Bidg., Chicago 4,
Annual meeting, September 13-15, Hotel Emerson,

Relimore.
ASSECTATION OF PASSECTA TARTIC OFFICERS.—B. D. Branch, Eastern Time Table Distributing Company, Liberty Street Terminal, New York 6. Annual meeting, October 9-13, Fintaine-blean Hotel, Miami Bench.
Astendars Assectations of Railboard Supercontendary,.—Miss Elize La Chance, Room 961, 431 S. Dendoon Sc., Chicago S.
Adminican Associations of Trayeline Passecon Activity.—C. A. Melin, P. O. Box Selfs, Cleveland I. Annual meeting, October I, Floridina Hotel, Tumps.
Astendars Consult of Railboard Workin,—Miss.
Jane Berke, New York, New Haven & Hartford,
Boston 27.
Astendars Inventors of Electronical Engineer.

ANTIRICAS CIUTAGE. OF RABINORA WORKN.—Min. Inc. Berley, New York, New Haven di Hartfurd, Boston IT.

ANGERICAN INSTITUTE OF ELECTRICAL ENGINEER.—N. S. Hilbelman, 33 W. 39th st., New York 18. Committee on Land Trensportation.—P. G. Lemmann, Westinghause Ellectific Corp., East Firmburgh. Fall general meeting, October 1-5, Chicago.

ANGERICAN RABINAY RIBERCY AND BURGINE ASSOCIATION.—Mine Eline La Chance, Raben 981, 431 S. Deadour Sc., Chicago, Angelicas Raben, S., Chicago, May 12-15, 1957, Schweder Hotel, Milwaukee.

Angelicas Raben, Western Pacific, 536 Minston Sc., Schweder Hotel, Milwaukee.

Angelicas Raben, Western Pacific, 536 Minston Sc., Schweder Hotel, Milwaukee.

Angelicas Raben, Western Pacific, 536 Minston Sc., Schweder Hotel, Milwaukee.

Angelicas Raben, S., Chicago, S., Angeli meeting, March 46, 1967, Sheraton-Jefferson Habel, Sc., Louis.

Angelicas Raben, March S., Chicago, S., Angeli meeting, March 46, 1967, Sheraton-Jefferson Hotel, Sc. Louis.

Angelicas Raben, March Magazine, English Bettel, Sc. Louis.

Angelicas Raben, March Magazine, March March, New York 17, Annual meeting, October 24-56, di Life Motel, Minmi Beach.

Angelicas Scarcy Pon Tuestee Materials.—R. J. Paliner, 1916 Rase Sc., Philadelphia 3, Pacific Area Meeting, New York 18, Ramado Downsons, Pon Tuestee Materian, Englishment, Angelica.

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Angeli

ARRICAN WORD-PRISERVAY'S ASSOCIATION.—W. A. Pernone, 539 Seventherath St., N.W., Washington 6, D. C.
ASSOCIATION TRAFFIC CLUBS OF ANKIDICA.—B. P. De-Groote, Luckenhach Sociamship Ca., Inc., 110 S. Dearbour St., Room 516, Chicago 3.—Annual meeting., October 14-US. Blacel Seetlife, Minni Bonch. Associations of American Ramason Densis. Can Covocias.—P. E. Geiffich, 2000 Clark Ave., St. Louis 3. Annual meeting, September 15-27, Broadmore Hotel, Colorado Springs.
Associations of American Ramason—Cenege M. Campbell, Transportation Bidg. Washington 6, D. C. Operations and Maintenance Department.—R. G. May, Vis-operation Transportation Bidg. Washington 6, D. C. Operations and Maintenance Department.—R. G. Operations Company. Transportation Bidg. Washington 6, D. C. Operations Company. Transportation Bidg. Washington 6, D. C. Operations and Maintenance Department.—R. G. Operations Section.—F. J. Parker, 39 E. Van Buren St., Chicago S. Transportation Section.—F. J. Parker, 39 E. Van Buren St., Chicago S. Annual meeting, May 21-33, 1952, Rayal Vonk Hotel, Tronsport.
Freight Lose and Dumage Prevention.—W. E. Todd, 39 E. Van Buren St., Chicago S. Annual meeting, May 21-33, 1952, Rayal Vonk Hotel, Tronsport.
Freight Lose and Dumage Prevention.—G. E. Ruble, 39 E. Van Buren St., Chicago S. Protection.—F. J. Parker, 59 E. Van Buren St., Chicago S. Protection.—F. J. Parker, 59 E. Van Buren St., Chicago S. Annual meeting, May 21-35, 1953, 1953, 1953, 2053, Annual meeting, May 21-35, 1953, Eval Von Buren St., Chicago S. Annual meeting, May 21-35, 1953, Eval Von Buren St., Chicago S. Annual meeting, May 21-35, 1953, Eval Von Buren St., Chicago S. Annual meeting, May 21-35, 1953, Eval Von Buren St., Chicago S. Annual meeting, May 21-35, 1953, Eval Von Buren St., Chicago S. Annual meeting, April 39-E. Van Buren St., Chicago S. Annual meeting, May 21-35, 1953, Eval Von Buren St., Chicago S. Annual meeting, April 39-E. Van Buren St., Chicago S. E. Va

Howard, 59 E. Van Buren St., Chicago S. Annual meeting, Masch 4-6, 1967, Sheraton-Jefferson Hotel,

Haverel, 59 E. Van Buren Se., Chicago S. Annual meeting, March 4-6, 1967, Sheraton-Jedferson Hotel, St. Lonis.

Signal Section.—R. H. C. Bullier, 59 E. Van Buren Se., Chicago S. Annual meeting, September 29-22, Conzad Hillann Hotels, Chicago.

Mechanical Bousion.—Ford Persuco, 59 E. Van Buren Se., Chicago S. Puschases and Surons Bi. Vanhington 6, D. C. Freight Chaim Division.—Brace H. E. Timanus, Transportation Billy, Washington 6, D. C. Seright Chaim Division.—Brace H. Smith, 59 E. Van Buren Se., Chicago S. Conceal Claims Division.—Brace H. Smith, 59 E. Van Buren Se., Chicago S. Car Service Division.—Brace H. Smith, 59 E. Van Buren Se., Chicago S. Car Service Division.—Brace H. Smith, 59 E. Van Buren Se., Chicago S. Car Service Division.—Brace H. Smith, 59 E. Van Buren Se., Chicago S. Car Service Division.—Brace H. Smith, 59 E. Van Buren Se., Chicago S. Car Service Division.—Arthur R. Seeler, Visco-president, Transportation Bildg., Washington 6, D. C. Framoportation Bildg., Washington 6, D. C. Annual meeting. September 17-30, Chaonan Frontenae, Quebec. Associators or Entrestant Concernae Concernation September 17-30, Chaonan Frontenae, Quebec. Associators or Entrestant Concernae Concernation Sections—Bills Surah F. McDannongh, Executive Secretary, 2218 ICC Building, Washington 25, D. C. Sentenae Concernation of Ramanah Asymptonica.

PRACTITUREMENT. Milion Sarain F. McDannengh, Enercitive Secretary, 2018 FCC Building, Washington 25, D. C.

Associations of Ranaman Assumements Mayacans.—

A. W. Echasin, Illinois Central, 135 E. Elevand, Pl., Chicago S. Annual meeting, January 21–38, 1957. Les Angeles.

BRIDGE AND BRINDING SUPPLY ASSOCIATION.—L. R. Gurley, Modern Railment, July 1968.

Wells Sc., Chicago S. Exhibite in conjunction with meeting of American Railment Beilige & Building Association, September 17–38, The Collissons, Chicago CANADIAN RABLWAY CLUB—C. R. Fin: Canadian Paritie Railway, Window Seation, Kontract Canadian Paritie Railway of Seat month of Seating, Chicago St. Valla, 266 Scott Ave., St. Louis S. Regular meeting, September 10–12, Hood Sherman, Chicago J. Annual meeting, Sector Onton Seaton Contract Canadian Control Canadian Seaton Control Control Canadian Seaton Control Canadian Seaton Control Canadian Seaton Control Control

SCHOOL W. MEMIRKON PARK, CHARGO N. Regular meetings first Thursday after frest Similay of each month except July and Angush, Hotel Sherman, 7:30 Jun.

CROCAGO RAZERGAN CAR ACCOUNTESS OFFICIARS.—
MAX Jutch (chairman) Chirago & North Western, 4899 N. Ravenwood Ave., Chirago & North Western, 4899 N. Ravenwood Ave., Chirago & R. Regular meetings last Wednesday of each month, except July and Angust, Milland Hotel, at 12:15 p.m.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS—H. C. Rachester, Canadian National, 191 Notes Dume St., West, Montreal 3.

EASTERN CAR FORMAN'S ASSOCIATION.—P. Prey. Central of New Jersey, Room 32, Jersey City Terminal, Jersey City 2. Regular meetings, second Friday of Jennary, February, March, April, May, October and November, 29 W. 19th St., New York, LOCOMOTIVE MANYIENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 17:17 Parker St., North Leithe Rack, Ark Annual meeting Spotember 19-12. Hotel Sherman, Chirago.

MAINTENANCE OF WAY CLUB OF CHICAGO.

—S. Kasco, 135 E. Elevanth Flace, Chirago S. Regular meetings, Spotember 19-12. Hotel Sherman, Chirago.

MAINTENANCE OF WAY CLUB OF CHICAGO.

—S. Kasco, 135 E. Elevanth Flace, Chirago S. Regular meetings, Spotember 19-12, Gotober and December, Railroad Machinery, April, October and December, Railroad Machinery, April, October and December, Railroad Machinery, April, October and December, Railroad Machinery, Chib, 30 Church St., New York 7. Meets in February, April, October and December, Railroad Machinery, Chib, 30 Church St., New York Next meeting, September 21-23, Batel Meetibach, Kansus City, Mo.

Memossayev Valary Manyewsky R. W. Okie, Essemer and Lake Erie, P. O. Box 536, PittsBuugh 38, Annual meeting, September 21-23, Batel Meetibach, Kansus City, Mo.

Memossayev Valary Manyewsky R. W. Okie, Essemer and Lake Erie, P. O. Box 536, PittsBuugh 38, Annual meeting, September 21-23, Batel Meetibach, Kansus City, Mo.

Memossayev Valary Manyewsky R. We.

Nectober 190 Annual Memos City, Mo.

Memossayev Valary Manyewsky R. W. North Meeting, September 21-

Emil.

NATIONAL ASSOCIATION OF RAILBOAD AND UTILITIES COMMISSIONERS.—B. Everence Kneeger. 7413 New Post Office Stilp., P. O. Box (See Association) of the Commission of the Commission of the Commission of the Commission of Surveys Association of Surveys Association of Surveys Association of Surveys Association of Commission of Surveys Association of Commission of C

Ave., Washington 6, D. C. Annual meeting, October 15-17, Horels Utah and Nowhouse, Sain Lake City.

Naturkal Isoccythia Engryic Leadur.—E. J. Durr, Soilte 1919, Sheraton Blög., 711 14th Se., Washington 5, D. C. Annual meeting, November 15-16, Commodore Hotel, New York.

Naturkal Rahman Appliances Associations.—Kemmeth Cerins, Fairmont Railway Motons, Inc., 310 S. Michigan Ave., Chicago 4. Louis Thamso, Assoc. Sercy., 39 E. Van Buren St., Chicago 5.

Naturkal Sarry Commin. Ramban Steinass.—I. H. Williams, Yeans & Parithe, Fersa & Parithe, Blidg., Dallis 2.

Nature Sucasso Ramasao Cons.—William M. McCombs, 185 Levin Wheef, Boston Bl. Regular meeting, second Tuesday of each month, except May-September, incl., Hotel Vendous, Roston.

Naw York T. Regular meetings, third Thursday of each month except June, July, August. September and Decomber. Century Roston. Commodore Hotel. Reception 6 p.m.; dinner, 7; meeting, 8-15.

Northways Cantan's Associations.—W. J. Maglich, Minnesoto Transfer Ry., 2011 University Ave., Sc. Piul 4, Minn. Regular meetings, forch month, except June, July, and Angust, Modway Chb., 1901 University Ave., Sc. Piul 4, Minn. Regular meetings, forch month, except June, July, and Angust, Modway Chb., 1901 University Ave., Sc. Piul 1, Kimm. Regular meetings, forch month, except June, July, and September, Hotel Sc. Piul 1, Kimm. Regular meetings, forch Thursday of March, June and November, Hotel Nicollet, Minne-applic.

Nonthern Purific, Sc. Piul 1, Kimm. Regular meetings, fourth Tuesday of March, June and November, Hotel Nicollet, Minne-applic.

Northern Pacific, St. Panil I, Minn. Regular meetings, fourth Tuesday of January, May and September, Hood St. Paul St. Peul: fourth Tuesday of Manch, Jane and November, Hotel Nacollet, Minneapolits.

Nonemwase Mainvernance ow Way Club.—L. C. Blanchard, Milleunkae Passenger Depot, Minneapoliti I. Regular meetings, fourth Tuesday of each month, September through April, includence, excepting November and December which are third Thursday, Midway Chib., 1931 University Ave., St. Paul.

PACEFER RAHWAY CLUB.—S. E. Byler, 121
E. Sixth St., Los Angeles H. Regular meetings, second Thursday of each alternate month at Palace Hetel, San Francisco, and Elks' Temple, Los Angeles.

RAHLROAD PUBLIC RELATIONS ASSOCIATION.—J. Dun Pred. Association of American Bailroads, Transportation Bidg., Washington 6, D. C. Rahway Chib, or Pursuance.—G. E. Morrison, 2710 Koppers Bidg., Pirabough 19. Regular meetings that Thursday of each month, except Jane-September, incl., and December, Hotel Shervyn.

Dinner, 6-30 p.m.; meeting, R. Rahway Excesse Associations.—L. R. Oswold, Thus. A Edison, Inc., 1509 S. Western Ave., Chicago 8.

Rahway Frink and Tharwitze Ewitsonem' Associations.—L. R. Peters, New York Central, Room Elli, Style W. Vin Buren S. C. Chicago S. Annual meeting, September 19-12. Hotel Sherman. Chicago.

Rahway Frink and Tharwitze Ewitsonem' Associations.—A. W. Brown, ST Lecington Ave., New York IT. Rahway Styrens and Thursday of Manufaction Conducts.—L. R. Chicago S. Annual meeting, September 19-12. Hotel Sherman. Chicago.

Rahway Trushassay Ewitsonem S., Van Rahway Styrens And Thursday M. Edmonds, 1221 Locus St., St. Louis B. Annual meeting, September S., Louis B. Annual meeting, September S., St. Louis B. Regular meetings, Recomer S., St. Louis B. Regular meetings, Packary S., St. Louis B. Regular meeting, September S., June, Angust, October S.-1, Rahway Tuesday Americans.—Box M. Edmonds, 1221 Locus St., St. Louis B. Regular meeting, September H. P. Commenter, S. P. C. Dev 1654, Nov. 1018, Nov. 1018, Nov. 1018, Nov. 1018, Nov.

Mannehamics of way Association, September 17-37, The Colliseum, Chicago.
WESTERN ASSOCIATION OF RAILWAY TAX COMMISSIONERS.—L. R. Norberg, 516 W. Isck-son Blyd., Chicago & Regular meetings, 12-15 p.m., first Wednesday of each month, except fully and Angust, Traffic Club. Palmer House, Chicago.
WESTERS RAINWAY CLUB.—E. E. Thalin, Suite 339, Hatel Sheeman, Chicago I.

## Railway Officers

ATLANTIC COAST LINE. — Raymond J. Shinn, Jr., appointed manager of public relations, Wilmington, N.C.

C. Patterson, trainmaster at Lakeland, Fla., promoted to superintendent, Columbia district at Florence, S.C.
H. N. Strange, Jr., trainmaster at Charleston, S.C., transferred to Columbia district at Florence. C. H. Dow appointed trainmaster, Jacksonville district, at Sanford, Fla., succeeding W. O. Brinson, who replaces Mr. Strange at Charleston.

A. C. Parker appointed engineer maintenance of way, Southern division, at Jacksonville, Fla., succeeding C. E. Vick, whose appointment as general industrial agent at Wilmington was noted in Railway Age, June

4, p. 52.

J. D. Taylor and J. E. Johnson appointed assistants to general freight agents, Wilmington, N. C.

BALTIMORE & OHIO.—W. J. Buck named division passenger agent, New York, succeeding E. J. O'Hearn, retired.

CANADIAN NATIONAL.—S. J. Raymond, industrial and joint facility commissioner, Central region, appointed special assistant to vice-president, Central region, Toronto, Ont. W. C. Hymus, commissioner of development, department of research and development, Montreal, succeeds Mr. Raymond as industrial commissioner at Toronto.

N. A. Little, trainmaster, Gravenhurst, Ont., appointed terminal trainmaster at Windsor, Ont., succeeding R. E. McKague, transferred. R. A. Walker, transportation assistant, appointed trainmaster, Capreol division, Capreol, Ont., succeeding A. A. Smail, promoted. R. C. Field, trainmaster, Cornwall, Ont., succeeds Mr. Little as trainmaster, Allandale division, Gravenhurst.

J. E. Troyer, assistant division engineer, London, Ont., appointed division engineer, Allandale division, Allandale, Ont., succeeding R. H. Menary, transferred. J. D. Walker, assistant engineer, London, appointed division engineer, Capreol division, Capreol, succeeding H. J. Cherry, transferred. J. S. Busby, assistant division engineer, Cochrane, appointed division engineer, Cochrane division, succeeding R. L. Gray, transferred.

Charles A. Wilson, assistant to general manager, sleeping, dining and parlor car department, Montreal, appointed western regional general superintendent of that department at Winnines, Man.

nipeg, Man.

Joseph P. Blanchet, regional manager, real estate department, Moncton, N. B., appointed assistant to general manager of that department at Montreal. Leslie H. Collins, assistant regional manager of real estate,

Toronto, succeeds Mr. Blanchet a Moncton.

Alfred B. Rosevear, assistant general solicitor, Montreal, appointed general solicitor.

Henry J. Betts, electrical engineer, Central region, Toronto, appointed chief electrical engineer, Montreal, succeeding Harold F. Finnemore, retired. J. D. Sylvester, electrical engineer, Montreal, transferred to Toronto, replacing Mr. Betts. Robert Burn, supervisor of staff training, mechanical department, Montreal, succeeds Mr. Sylvester.

Robert M. Shaw, associate editor, Canadian National Magazine, appointed managing editor, succeeding Charles W. Higgins, retired.

J. A. Skull, assistant regional public relations representative at Winnipeg, Man., named regional public relations representative there, succeeding H. Bruce Boreham, retired.

CENTRAL OF GEORGIA. — James Webster Shirley, assistant trainmaster, Macon, promoted to terminal trainmaster there.

CHESAPEAKE & OHIO.—U.
H. Auckerman, circuit engineer,
Southern region, at Richmond, Va.,
named assistant signal engineer—system at that point and is succeeded by
P. L. Wheeler. C. M. Kern, assistant division engineer at Huntington,
W. Va., appointed division engineer,
Hinton division, succeeding H. S.
Talman (Railway Age, May 21, p.
134).

Charles L. Rothgeb, general coal traffic agent at Cleveland, retired May 31. Frank R. Pattison, coal traffic agent at Cleveland, named assistant general coal traffic agent there. Alton E. Carrick, assistant coal traffic agent at Cleveland, appointed coal traffic agent. Carl B. Weber, special representative, coal development office at Huntington, W. Va., promoted to assistant coal traffic agent at Cleveland.

D. F. O'Connell and W. A. Griffith appointed general agents, passenger department, at Chicago and Columbus (Ohio), respectively. J. A. Black named division passenger agent at Richmond and H. C. Wilson appointed district passenger agent at Cincinnati.

J. O. Yates, auditor disbursements, Huntington, W. Va., appointed auditor—payroll accounts at that point; H. M. Crenshaw, auditor expenditures, Richmond, named auditor—miscellaneous accounts there; R. L. Austin, assistant auditor disbursements, Huntington, appointed auditor—material accounts there; C. C. Carter, assistant auditor disbursements, Huntington, named assistant auditor of expenditures at that point.

M. I. Dunn, vice-president—construction and maintenance at Huntington, W. Va., appointed vice-president—operations, in charge of the combined transportation, mechanical and engineering departments at Cleveland

The system has been divided into three regions, each headed by a regional manager: Eastern region, Richmond Va., headed by E. T. Rucker; Central region, Huntington, by R. G. Vawter; and Northern region, Detroit, by C. J. Millikin.

NEW YORK CENTRAL.—Robert E. Kappauf, audit staff manager for Price, Waterhouse & Co., named assistant comptroller of the NYC.

A. L. Simons appointed assistant industrial engineer at New York. Edward R. Ahlborn, division passenger sales manager, New York, ap-



Richard C. Marshall



William Oncken, Jr.

ager at Albany, N. Y. John P. Sweeney, district passenger sales manager at New York, succeeds Mr. Ahlborn as division passenger sales manager.

Richard C. Marshall, public re-

lations representative, Cleveland, appointed director, news bureau, New York.

William Oncken, Jr., chief, civilian personnel office, Department of the Army, Washington, D.C., named to new position of director of management development of the NYC. Mr. Oncken will be responsible for analyzing the Central's management personnel needs and developing a program to meet them. He also will be responsible (Continued on page 45)

# **EXIDE-IRONCLAD BATTERIES**



# Greater effective plate area boosts power for peak loads



BATTERY FOR RAILWAY CARLIGATING AND AIR CONDITIONING. Model EHL. Tubular construction of positive plate especially important in preventing flaking of active material under constant vibration. Insures long life and ability to handle high peak loads. Write for Bulletin 5168.



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out increasing plate size. Here's how:

In the Exide-Ironclad positive plate, active material is held captive in tubes of slotted polyethylene. These tubes are arranged in a tight row with electrical connections only at the top. The actual surface of the plate is the combined semicircular sides of these tubes—the total surface area being roughly one-third more than the projected dimensions of the plate.

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# "Handyman D" cuts costs on right-of-way maintenance

This versatile off-track D Tournapull handles scattered earthmoving maintenance along your miles of track quickly, and at low cost.

The "D" has a heaped capacity of 71/2 yards, speeds to 29.5 mph. This one rig, with its single operator, can clean and cut ditches, slope banks, repair washouts, widen roadbed, grade for sidings, build levees, raise grade, spread ballast, haul snow from yards and sidings. With dozer blade, Tournapull gives you a highspeed "traveling-man dozer" to clear fallen debris off tracks, strengthen levees, push-load scrapers, pile brush, backfill around culverts, stockpile coal and ballast. With snow-plow attachment, it opens tracks for use in yards, cleans sidings, and plows roads for access.

Speedy off-track mobility of the D Tournapull is an important factor in keeping your right-of-way in good condition at low cost, A phone call starts it to the job — by way of track, right-of-way, or public highway. Tournapull can easily travel 50 miles from your yard . . . complete several scattered small jobs . . . and be back the same day. Often it completes its assignments and is back at the yard, ready for the next job, before a crawler-scraper combination can be loaded on train or truck and sent on its way!

#### "D" crosses tracks with ease

Big, 5' high, low-pressure tires deflect around rather than grind into obstructions to prevent damage. Tires will not chamfer ties, loosen rails, damage block-signals or switches. Neither are tires damaged by crossing tracks, rocks, curbs. Check into the worthwhile savings possible with speedier, more efficient Tournapull for your earthmoving maintenance. Write us for complete specifications and performance figures. Ask also for owner-verified reports on "D's" rail-line work.

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# LeTourneau-WESTINGHOUSE Company Railroad Sales Division

Peoria, Illinois
A Subsidiary of Westinghouse Air Brake Company



#### **GETTING LESS SLIP...**

(Continued from page 35)

mum of dispersion. This nozzle is made from standard 1-in. pipe and fittings. It is claimed to be self-alining and self-positioning. Further assurance of delivery at the wheel-rail contact point was made by designing a new bracket applied to the brake slack adjuster and by developing a stabilizer applied to the brake rigging to prevent its lateral movement.

#### Sand Quality

The sand used during the development work and which was rated by the SP as an "ideal" material had the following characteristics:

Without sand of this type the committee stated that their equipment modifications would be largely nullified. Dry sand is of great importance. Not only must the sand be dry when delivered to the locomotive, but it must stay dry once it is placed in the sand boxes and until it is delivered to the rail. When operating with the reduced amount of sand, it was found that all sanders must be operating.

The committee recommended that sand box gaskets be renewed whenever necessary to keep moisture out of locomotive sand. This moisture can enter when the unit is going through mechanical washers. Gaskets under the sand box and under the deck plates also can be entry points for moisture. Air contained in the compressed air can be eliminated by automatic drain valves in the reservoirs, water separators in the air lines, and by moisture separators ahead of the sanders.

Already this work is lowering SP sand consumption toward a predicted goal of an 83 per cent reduction. However, work will be continued on refinements in locomotive design and in the methods of actuating sanding equipment. Projects to do this include time limited sanding, traction motor regrouping, automatic wheel creep sanding, and automatic wheel creep braking.

(Continued from page 42) for preparation of management training programs and recruiting of executive personnel from both inside and outside the Central's organization.

RICHMOND, FREDERICKS-BURG & POTOMAC.—Woodward B. Baugh, assistant trainmaster, appointed trainmaster at Richmond, Va., succeeding the late John W. Hall, Jr.

ROCK ISLAND.—K. J. Bays, Canadian traffic manager at Toronto, promoted to assistant freight traffic

manager at Chicago.

R. B. Smith, assistant to vicepresident, operations, in charge of contracts, appointed manager of tie and
timber department, succeeding Roy
Lumpkin, retired. C. J. Driscoll replaces Mr. Smith. R. J. Lane, assistant division engineer at Rock Island, Ill., named special representative
to vice-president, operations.

Harold A. Berry, appointed manager of purchases and stores, Chicago, succeeding W. H. Lloyd, retired. Mr. Berry formerly served as manager of procurement of the Ingersoll-Kalamazoo Division of Borg-Warner Corporation at Kalamazoo, Mich.

SANTA FE.—Walter L. Huebner, master mechanic at Los Angeles, appointed assistant to general manager—mechanical department at Chicago succeeding W. P. Hartman, assistant general manager — mechanical department, retired.

Frank R. Kelley, general traveling passenger agent at Chicago, appointed division passenger agent, Oakland, Cal., succeeding C. G. Mueller,

E. P. Dudley, assistant general manager, Amarillo, Tex., retired June 30.

SEABOARD.—R. L. Cleveland, commercial agent, Norfolk, named district freight agent there, succeeding the late Sidney V. Dame.

SOUTHERN PACIFIC. — I. O. Underhill appointed assistant to general manager at San Francisco.

eral manager at San Francisco.
V. R. Cooledge, assistant engineer of bridges at San Francisco, appointed engineer of bridges there, succeeding J. P. Dunnagan, retired.

Allen J. Schwark, chief clerk, purchasing department, at New Orleans, La., promoted to assistant to purchasing agent. Los Angeles Cal

purchasing agent, Los Angeles, Cal. Edward M. Costello appointed general manager of Los Angeles Union Terminal, Inc., an SP subsidiary, succeeding the late George H. Blake. Mr. Costello will have general supervision over the Seventh Street Market, the warehouse section of the wholesale terminal, and the Los Angeles Public Market.

SOUTHWESTERN PASSENGER ASSOCIATION.—A. H. Ritter, vicechairman, appointed chairman at St Louis, succeeding V. T. Corbett, retired.

# 7 reasons why...

No other crane gives you Tournapull-Crane's revolutionary lift-and-carry operating advantages for all-around load handling and "roustabout" crane service. This completely mobile unit is capable of lifting, carrying and placing heavy loads from any footing. With versatility of many interchangeable tools, it has operating and maintenance cost of only one. Check these 7 exclusive features, then let us show you proof of Tournapull-Crane's ability to make and save money for you!

- 1 Powered mobility...prime-mover's powerful diesel, torque-proportioning differential, plus flotation of 4 big, low-pressure tires, carry full loads over tracks, yards, pavement, blacktop, soft fill, etc. Travels jobto-job via highway, along right-ofway, or straddling the rails.
- 2 Makes 90° turns left or right, has power-steer plus independent-drive. Gives you accurate, simplified load-placing in restricted areas with minimum maneuvering. No other crane has similar versatility and ease of load handling.
- 3 Stability without outriggers... safely counter-weighted by entire prime-mover, this crane lifts and carries its rated loads. Tournapull-Cranes can carry loads on short boom and short line with no dangerous swinging. Working off-track, it makes an excellent clean-up tool for derailments, and for many bridge and trestle repairs.
- 4 Three-way crane action...with or without load, boom can be raised or lowered, extended or retracted ...hoist-block raised or lowered by powerful electric motors operating singly or together for fast, safe spotting. Power-action up-and-down avoids jerking, handles load safely.



- 5 Travels, lifts under low overhead
  ... will reach into 9'2" doorway
  with boom lowered. Can work inside shops, warehouses. Can reach
  inside box-cars to remove heavy
  loads. Reaches under overhead
  structures, through low doors, under
  bridges, through ship gangways.
  Additional interchangeable booms
  available for special applications.
- 6 Finger-tip control ... no levers to "fight". Dashboard electric switches control lift and steer, make operation easy and simple. Operators can be trained in a few hours.
- 7 Few parts, low maintenance... no complicated operating and driving mechanism. Tournapull-Crane operations are controlled by small, compact interchangeable electric motors. Rugged box-beam construction of carriage and boom stands up under extreme loads.

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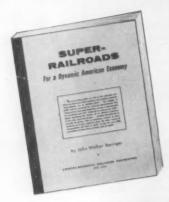
#### LeTourneau-WESTINGHOUSE Company

Railroad Sales Division
Peoria, Illinois

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# Don't send for this new book



# Unless you believe in railroading . . .

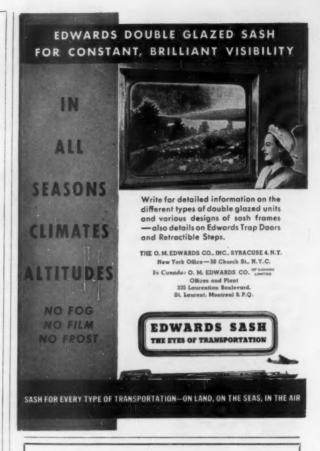
Can the railroads come back? Can they regain their dominant leadership in freight traffic . . . double or triple their passenger patronage? Railroad authority John Walker Barriger believes they can . . . and will! He has written this new 90-page book to prove it. But there's a catch, an "if". The railroads can fulfill their future, he predicts, "only if railway men themselves believe in that future." So here is a book for believers. Here is proof the railroads can do it; here is a program to help you in your business.

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How do you organize for "super-railroads"? Author Barriger first presents the tremendous problems the railroads face. Second, he points out that the way things are done today often doesn't jibe with the economic facts of life. Third, he shows what some revolutionary-minded railroad men have done. And, finally he gives a complete blueprint for the whole industry.

If you believe the railroads have the stuff and stamina for successful leadership, you'll want a copy of this bold blueprint for tomorrow. Send for your copy now. Fill out this coupon and mail today.

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### **Current Publications**

#### PERIODICAL ARTICLES

REVISION OF NATIONAL TRANSPORT REGULATORY POLICY, A Review Article, by James C. Nelson. The American Economic Review, December 1955. Reprints available from Association of American Railroads, Transportation Bldg., Washington 6, D.C. Free.

This article, dealing with the Report of the Presidential Advisory Committee on Transport Policy and Organization is designed primarily for distribution among business leaders and other opinion-makers who would have an interest in the economic theory involved in the Cabinet Committee Report. It discusses competitive emphasis in policy proposals, relaxed standards of rate control, competitive organization of transport industries, and basic questions.

SUPERVISORY MANAGEMENT. American Management Association, 1515 Broadway, New York 36. Subscription price for AMA members, \$6.50 a year; for non-members, \$7.50; quantity discounts.

Publication of this new magazine, designed for supervisors, was recently begun by the American Management Association. Representative articles appearing in the first three issues include: what makes a "good" foreman?; grievances are barometers; stimulating employees' development; it's the "no-belongs" who quit; should employees help solve a supervisor's problems?; and rating new employees.

BALTIMORE'S RAILROAD MUSEUM, by Jacob Hay. Holiday, June 1956, pp. 55, et seq. Curtis Publishing Company, Independence Square, Philadelphia 5. Single copies, 50 cents.

One of Baltimore's major attractions, housing the most complete collection of railroad models, equipment and rolling stock in America, is the Museum of Transportation of the Baltimore & Ohio. It is housed in the oldest surviving railroad depot in the United States, a gracefully designed Victorian roundhouse, and a onetime printing shop. Open only three years, the museum contains what is de-scribed as one of the finest existing collections of model railroad bridges, the world's most complete miniature railroad representing practically every type of locomotive and rolling stock now in use on American railroads, and a roundhouse filled with the locomotives that have given American railroading a history. Also included in the museum is an extensive collection of railroad insignia, lighting fixtures, and other forms of land transportation.

NOTICED THE NEW HAVEN?, by Suzanne Burrey. Industrial Design, February 1956, pr 52-70. Whitney Publications, Inc., 18 E. 50th st., New York 22. Single copies, \$2.

A comprehensive design program for the New Haven was started during the McGinnis regime. "Its daring can be credited to Patrick McGinnis; its quality to his wife, Lucille," says the author. It included equipment, stations, menus, brochures, annual reports, etc. Miss Burrey describes how the four consultants, designers Herbert Matter and Florence Knoll, and architects Minoru Yamasaki and Marcel Breuer, worked, and what they accomplished.

The three new trains—Talgo, Train X and the RDC "Hot Rod"—all with Breuer interiors, are also described.

THOSE NEW TRAINS . . . MORE SPLASH THAN SPEED?, by Donald M. Steffee. Trains, May 1956, pp. 40-50. Kalmbach Publishing Company, 1027 N. 7th st., Milwaukee 3. Single copies, 50c.

This is Trains' Annual Speed Survey. In addition to the usual speed tables Mr. Steffee discusses the new lightweight trains, cautions against expecting the impossible from them, and explains why. He also comments on schedule changes made during 1955 and includes a brief discussion of fast freight services. Reluctantly concluding that its world's record run of 86.2 mph from East Dubuque to Prairie de Chien was too tight for everyday timekeeping, the Burlington none-the-less retains the championship. The new mark is a slightly lower 84.4

average from Prairie du Chien to La Crosse, shared by the "Empire Builder" and the two "Twin Cities Zephyrs."

In freight service the claim of No. 109 of the ACL to the title of world's fastest freight train not only is strengthened but is shared by a new northbound train, No. 110. Both trains average 43.7 mph for the 643 miles between AY (Richmond) and Moncrief (Jacksonville). No 110 also has the distinction of having the fastest start-to-stop schedule yet attained by a freight train—54.9 mph for the 201.5 miles from Southover Yard (Savannah) to Florence.

THE MOTOR TRANSPORTATION REVOLU-TION, by Merrill J. Roberts. The Business History Review, March 1956, pp. 57-95. Harvard Graduate School of Business Administration Boston 63. \$10 a year; single copy rate not shown.

The evolution of the motor transportation industry is here divided into major chronological divisions, with some summary observations about post-World War II conditions. Major emphasis is laid upon different developmental patterns exhibited by various motor carrier classifications, upon the competitive interreaction of rail and motor transport interests, and upon the far-reaching effect of state and federal regulation.



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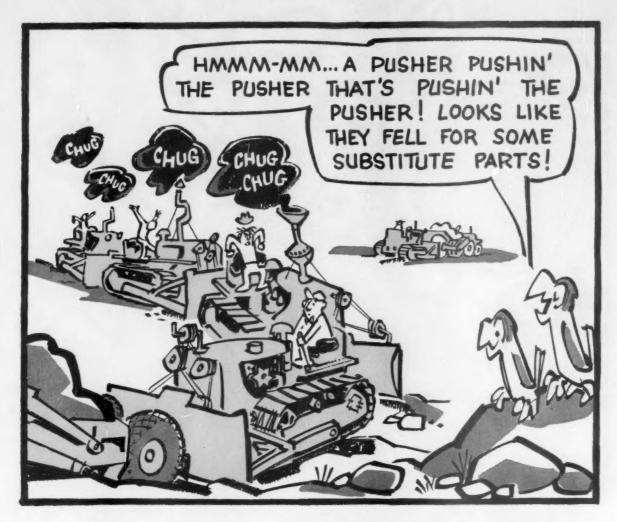
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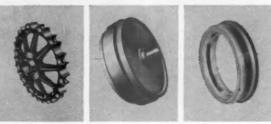
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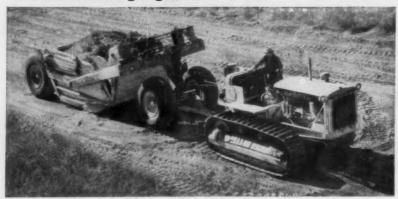
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